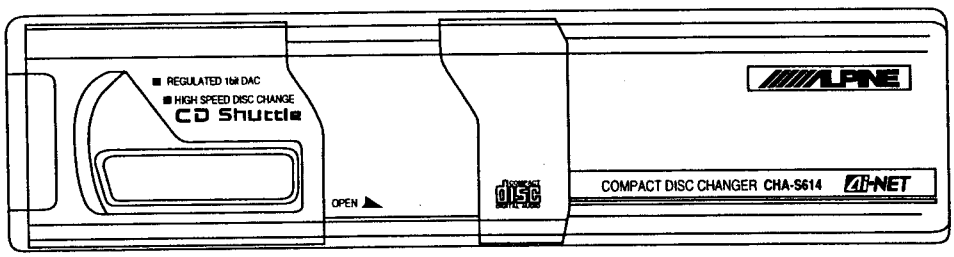
ALPINE

SERVICE MANUAL

Compact Disc Remote Changer

COMPACT disc DIGITAL AUDIO

- The model described in this manual is developed from Model CHA-S604. For information that is not mentioned in this service manual, refer to the Service Manual • CHA-S604 (Part No. 68E23646S01).
- For the CD Deck mechanism parts (DT24A030) of this model, refer to the Service Manual • DT Series (Part No. 68E23644S01).



CHA-S614

CHA-S614

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→ Refer to the Service Manual · CHA-S604 (Part No. 68E23646S01).

Specifications

NOTE : Refer to the Service Manual · CHA-S604 (Part No. 68E23646S01) for description not mentioned in this manual.

<GENERAL>

Output Voltage/Impedance ..... 850mV/10k ohm

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

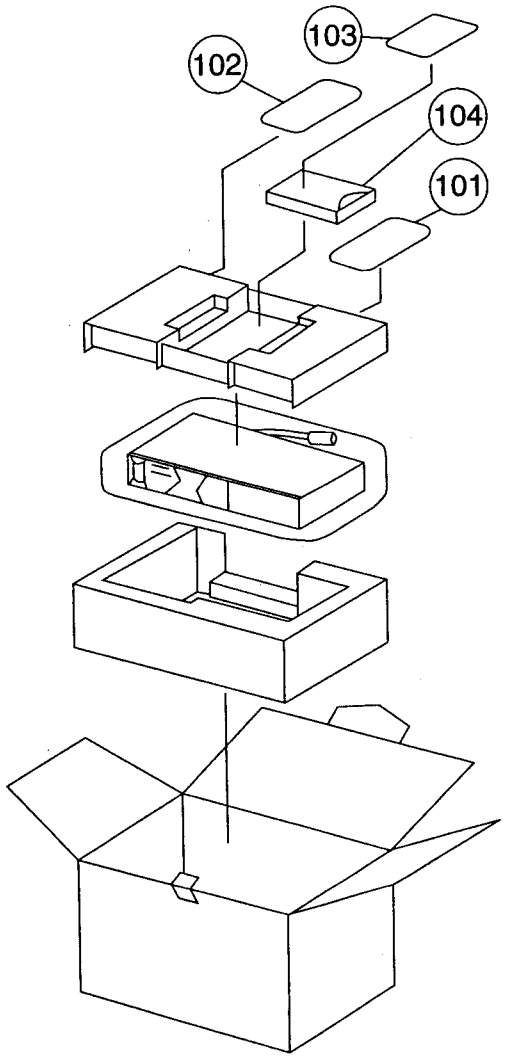
Packing Assembly Parts List

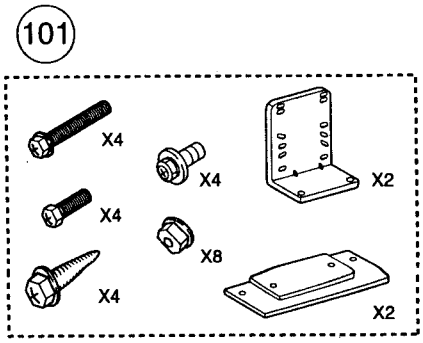
	Symbol No.	Part No.	Description
	101	01C71646W02	Assy., Kit Installation
	102	01T55561W34	Assy., DIN Connector
	or	01T00733K01	Assy., DIN Connector
	or	01T85472W01	Assy., DIN Connector
	103-1	68P91508W88	Owner's Manual
△	103-2	68P91508W90	Owner's Manual (I/G/S)
	103-3	54B50559W02	Label, Caution
	104	01D00560K01	Assy., Magazine

Symbol No.	Part No.	Description

NOTE: △: For General Foreign Model Only, Others: Common.

Packing Method View





CHA-S614

Electrical Parts List

NOTE : For the parts not mentioned, refer to the Service Manual for CHA-S604 (Part No. 68E23646S01)

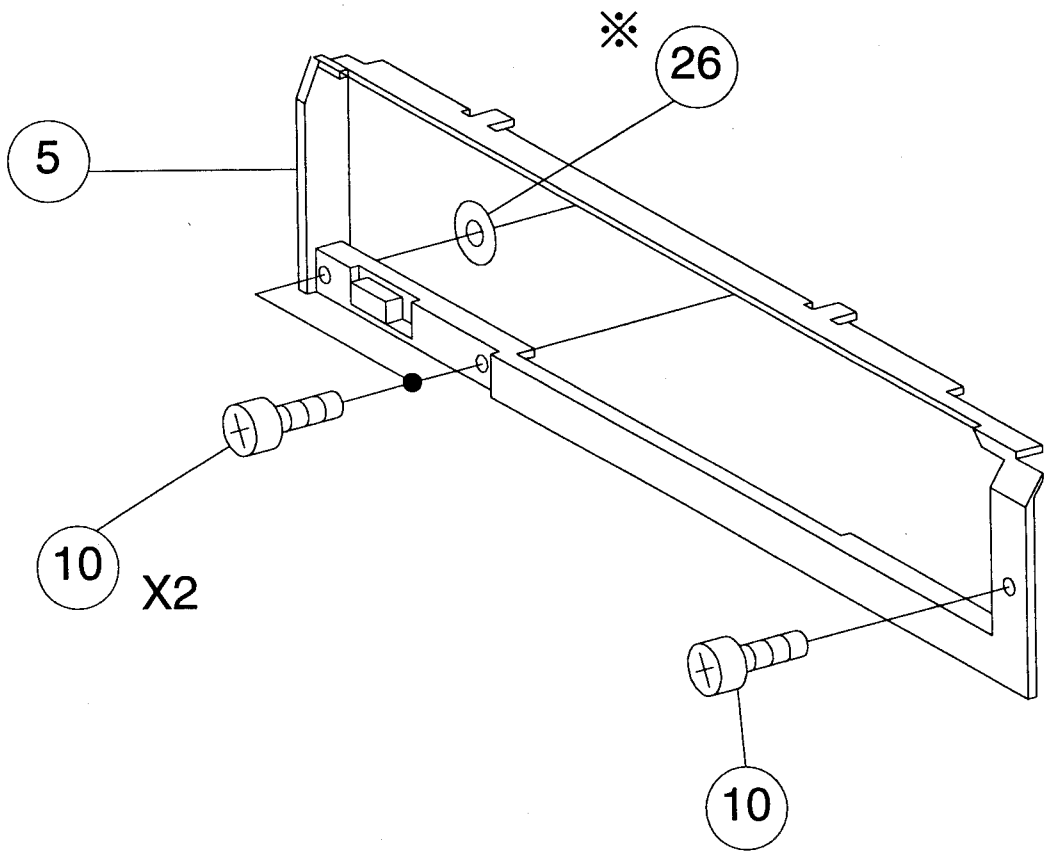
Model	CHA-S604		CHA-S614	
Symbol No.	Part No.	Description	Part No.	Description
Main P.C.Board				
IC's				
IC501	51T85288W01	85288W01	51T85288W04	85288W04
IC502	51T85304W01	X24C16	51T15231Y01	ST24C16FM6TR
Miscellaneous				
ET801	01T55619W08	Assy., Ai-NET Connector	01T55619W08	Assy., Ai-NET Connector
or	—	—	01T00734K01	Assy., Ai-NET Connector
or	—	—	01T85473W01	Assy., Ai-NET Connector

Cabinet Assembly Parts List

NOTE : For the parts not mentioned, refer to the Service Manual for CHA-S604 (Part No. 68E23646S01).

Model		CHA-S604			CHA-S614	
Symbol No.	Index	Part No.	Description	Index	Part No.	Description
1	1-E	15D81140W01	Cover, Top		15D81140W02	Cover, Top
3	5-B	13C81134W01	Assy., Front Escutcheon		13C81134W03	Assy., Front Escutcheon
5	2-B	64B60211W04	Assy., Plate Inner		64C60211W04	Assy., Plate Inner
9	3-D	03S44205G62	Screw, Bind (M2.6X5)		03S38013W36	Screw, Bind (M2.6X4)
12	1-C	15C81141W01	Cover, Side (R)		15C81141W03	Cover, Side (R)
15	1-F	15C81141W02	Cover, Side (L)		15C81141W04	Cover, Side (L)
22	3-F	15B81142W01	Cover, Spring (R)		15B81142W03	Cover, Spring (R)
23	1-D	15B81142W02	Cover, Spring (L)		15B81142W04	Cover, Spring (L)
26		—	—		14A11387Y01	Insulator, Cover Plate

Exploded View (Cabinet)



Parts Marked ※ are Addendum Parts.
(Only CHA-S614)

ALPI-00427

ALPINE
SERVICE MANUAL

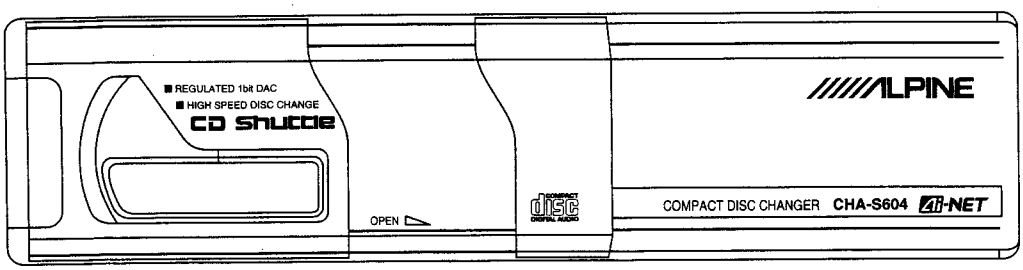
Compact Disc Remote Changer

CD Shuttle

COMPACT disc DIGITAL AUDIO

- The model described in this manual is developed from Model CHA-S605. For information that is not mentioned in this service manual, refer to the Service Manual・CHA-S605 (Part No. 68E22477S01). +426
- For the CD deck mechanism parts (DP24A030) of this model, refer to the Service Manual・DT Series (Part No. 68E23644S01).

- 当モデルは、CHA-S605がベースモデルとなっております。このマニュアルは相違点のみを記載しておりますので、詳細については、CHA-S605 (68E22477S01)のサービスマニュアルを参照願います。
- 本機のCDメカニズム (DT24A030)についての資料は、サービスマニュアル・DTシリーズ (68E23644S01)を参照願います。



Ai-NET

サービス費用区分	A
技術資料No.	MC-49-0

CHA-S604

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Servo Monitor ——— Refer to the Service Manual・ CHA-S605 (Part No. 68E22477S01).
サービスマニュアル・CHA-S605 (68E22477S01)を参照願います。

Specifications

NOTE : Refer to the Service Manual • CHA-S605 (Part No. 68E22477S01) for description not mentioned in this manual.

※ 記載されていない部分については、サービスマニュアル・CHA-S605 (68E22477S01) を参照願います。

＜GENERAL＞

Output Voltage/Impedance ..... 850±150mV/10k ohm
Dimensions (W×H×D) ..... 250×60×152.8mm

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

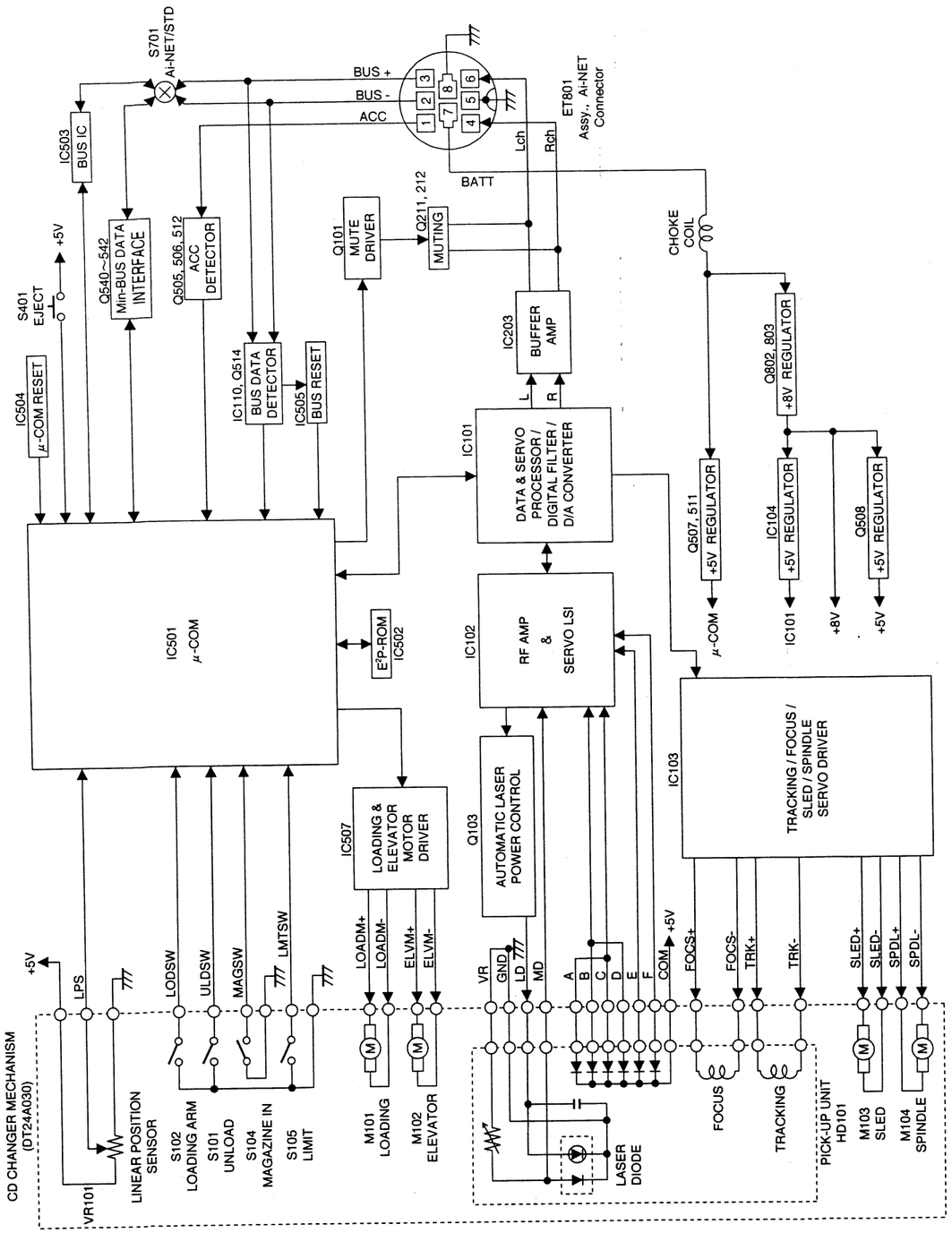
Description of IC Terminal

85288W01 : IC501

No.	Symbol	I/O	Terminal Description
1	Ai-RST	O	MB88385APF (IC503) Reset Signal Output Terminal.
2	Min-OUT	O	Min-Bus Data Output Terminal.
3	ACC-IN	I	ACC Detection Terminal.
4	NC	—	Open Terminal.
5	RST2	O	DAC Output Stop Terminal. (L : Output Stop)
6	SCL	I/O	E²P-ROM Clock Terminal.
7	SDA	I/O	E²P-ROM Data Terminal.
8	Ai-DET	I	Ai-NET Bus Busy Detection Terminal. (H : Busy)
9	V_{SS}	—	GND Terminal.
10	A0	O	MN66271 (IC101) Auto Adjustment Output Terminal.
11	A1		
12	A2		
13	ELVM+	O	Elevator Motor Output (+) Terminal.
14	ELVM -	O	Elevator Motor Output (-) Terminal.
15	LODM+	O	Loading Motor Ouptut (+) Terminal.
16	LODM -	O	Loading Motor Output (-) Terminal.
17	EJLED	O	Eject Key Lighting LED Output Terminal. (H : Lighting)
18	V_{SS}	—	GND Terminal.
19	BUS-SW	I	Bus Select Switch Terminal. (H : Min-Bus, L : Ai-NET)
20	NC	—	Open Terminal.
21			
22	STAT	I	MN66271 (IC101) Status Signal Terminal.
23	TLOCK	I	MN66271 (IC101) Tracking Servo Signal Pull in Input Terminal.
24	V_{SS}	—	GND Terminal.
25	FLOCK	I	MN66271 (IC101) Focus Servo Signal Pull in Input Terminal.
26	SENSE	I	MN66271 (IC101) Sense Signal Input Terminal.
27	NC	—	Open Terminal.
28	MLD	O	LSI Control Latch Output Terminal.
29	MDATA	O	LSI Control Data Output Terminal.
30	MCLK	O	LSI Control Clock Output Terminal.
31	XRST	O	Surrounding Reset Termianl. (L : Reset)
32	DMUTE	O	Digital Mute Output Terminal. (H : Silence)
33	AMUTE	O	Analog Mute Output Terminal. (H : Silence)
34	VCONT	O	Power Supply Control Output Terminal. (H : Power On)
35	RESET	I	System Reset Input Terminal.
36	B-HOLD	I	Battery Power Supply Voltage Detection Terminal. (L : Stand-by)
37	BUS-IN	I	Min-Bus Input/MB88385APF (IC503) IRQ Input Terminal.
38	A-HOLD	I	ACC Detection Terminal. (L : Stand-by)

No.	Symbol	I/O	Terminal Description
39	BLKCK	I	MN66271 (IC101) BLKCK Input Terminal.
40	V_{DD}	—	+5V Power Supply (Battery) Terminal.
41	X2	—	8.38MHz System Clock Terminal.
42	X1	I	
43	V_{SS}	—	GND Terminal.
44	NC	—	Open Terminal.
45	V_{SS}	—	GND Terminal.
46	AV_{SS}	—	Analog GND Terminal.
47	LPS	I	Linear Position Sensor A/D Input Terminal.
48	TEMP	I	Temperature Thermistor A/D Input Terminal.
49	DOSW	I	Optical-Out Output Terminal. (Fixation L)
50	ULDSW	I	Unloading Detection Switch Terminal. (L : Unloading)
51	LODSW	I	Loading Detection Switch Terminal. (L : Loading)
52	MAGSW	I	Magazine Input Detection Switch Terminal. (H : MAG-IN)
53	LMT SW	I	Limit Switch Terminal.
54	EJKEY	I	Eject Switch Input Terminal.
55	AV_{DD}	—	+5V Power Supply Terminal.
56	AV_{REF}	—	+5V Power Supply (V-CONT) Terminal.
57	SUB-Q	I	MN66271 (IC101) SUB-Q Input Terminal.
58	NC	—	Open Terminal.
59	SQCK	O	SUB-Q Reading Clock Output Terminal.
60	Ai-RS	O	MB88385APF (IC503) Register Select Output Terminal.
61	Ai-R/W	O	MB88385APF (IC503) Register Read/Wright Selection Output Terminal. (H : Read)
62	Ai-SIN	I	MB88385APF (IC503) Serial Data Input Terminal.
63	Ai-SOUT	O	MB88385APF (IC503) Serial Data Output Terminal.
64	Ai-SCLK	O	MB88385APF (IC503) Serial Clock Output Terminal.

Block Diagram



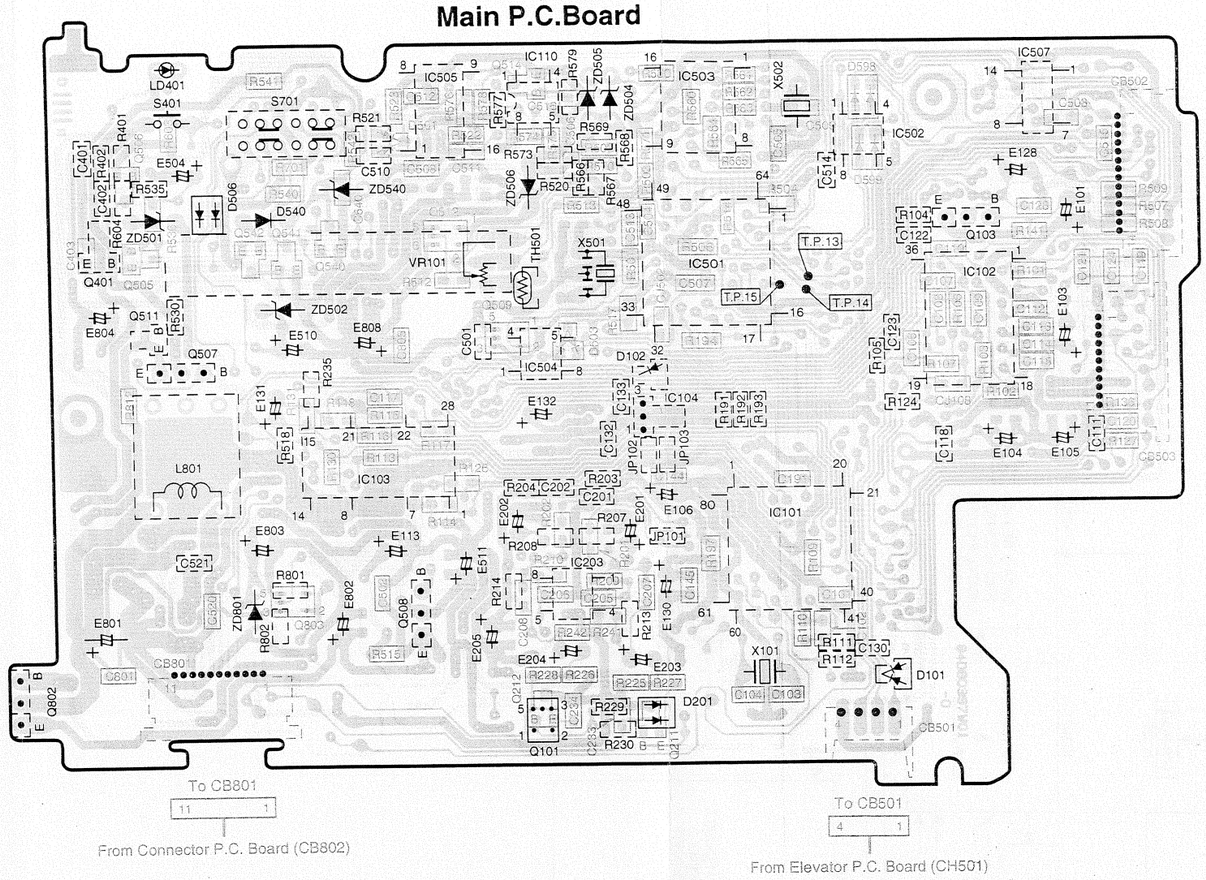
MEMO

CHA-S604 CHA-S604

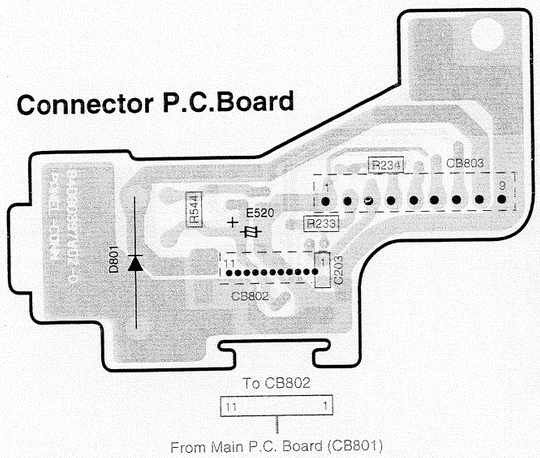
Parts Layout on P.C. Boards and Wiring Diagram

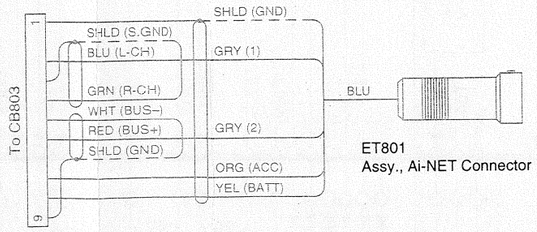
All P.C. Boards viewed from soldered side.

Main P.C.Board



Connector P.C.Board



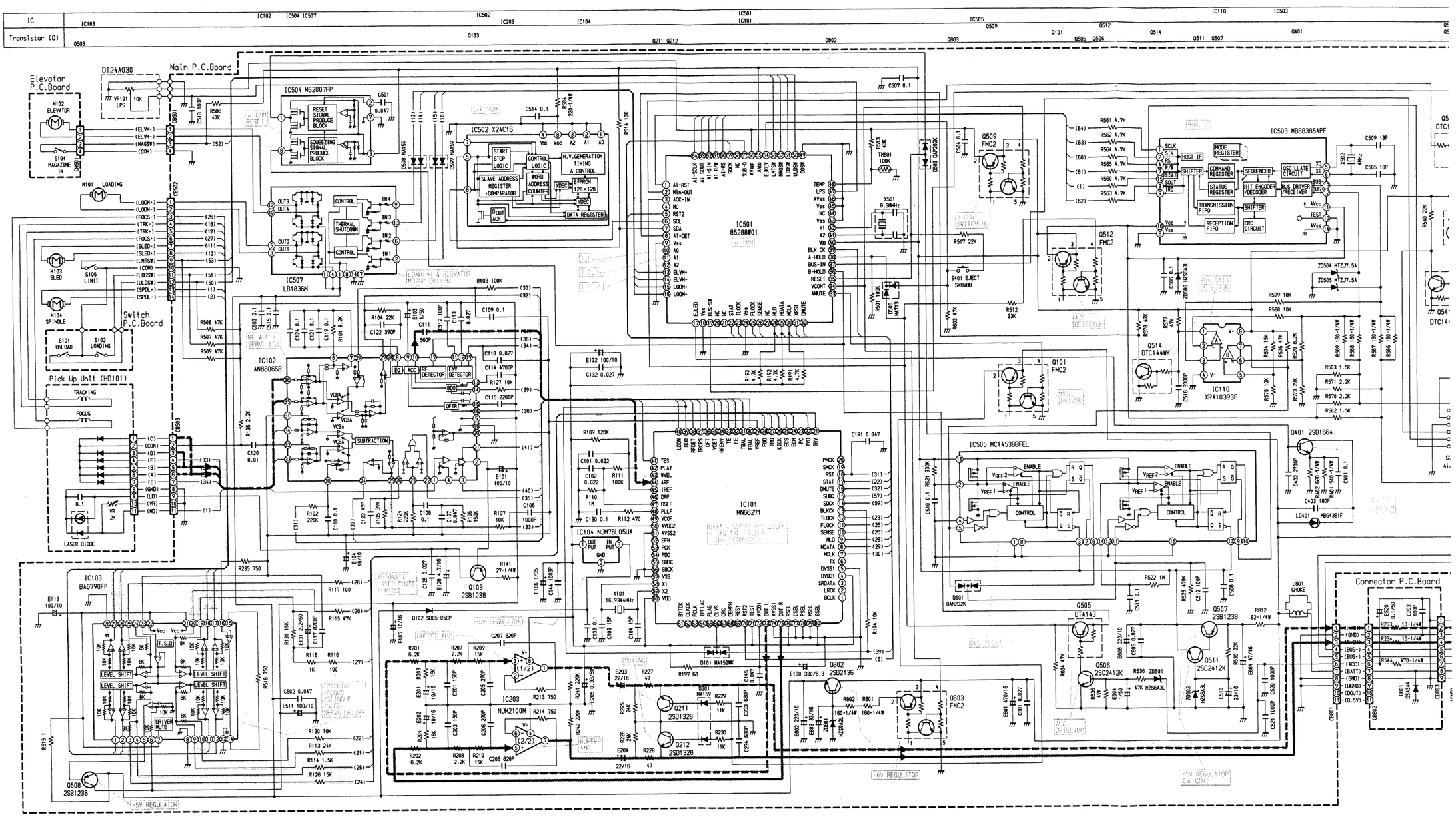


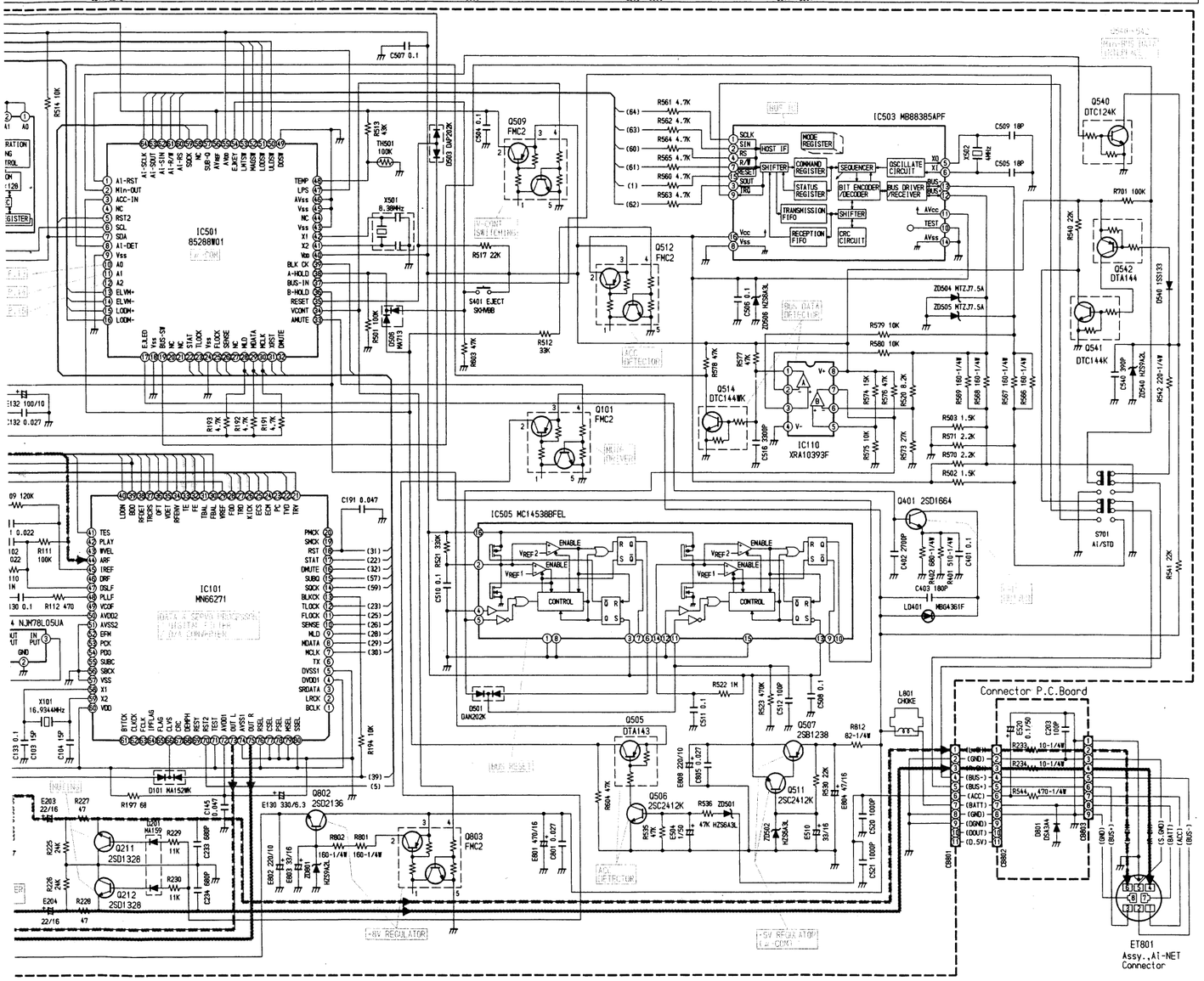
NOTE: Refer to the Service Manual・CHA-S605 (Part No. 68E22477S01) for description not mentioned in this manual.

※ 記載されていない部分については、サービスマニュアル・CHA-S605 (68E22477S01)を参照願います。

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

Schematic Diagram





IC101

1	NC	21	2.5V	41	0.1V	61	NC
2	NC	22	2.6V	42	NC	62	NC
3	NC	23	NC	43	NC	63	NC
4	5V	24	2.5V	44	2.5V	64	NC
5	0V	25	2.5V	45	1.5V	65	NC
6	NC	26	2.4V	46	NC	66	5V
7	5V	27	2.6V	47	2.5V	67	5V
8	5V	28	2.7V	48	2.1V	68	NC
9	4.9V	29	2.6V	49	NC	69	5V
10	0V	30	2.5V	50	5V	70	4.9V
11	0V	31	2.6V	51	0V	71	5V
12	0.1V	32	2.5V	52	NC	72	4.9V
13	0.1V	33	2.5V	53	NC	73	2.5V
14	4.9V	34	2.5V	54	NC	74	0V
15	5V	35	0V	55	NC	75	2.5V
16	0V	36	0V	56	0V	76	5V
17	5V	37	1.5V	57	0V	77	0V
18	5V	38	0V	58	2.5V	78	0V
19	NC	39	0V	59	2.3V	79	0V
20	NC	40	5V	60	5V	80	5V

IC102

1	0.2V	19	2.5V
2	3.3V	20	2.6V
3	5V	21	0.1V
4	NC	22	0V
5	5.1V	23	2.1V
6	2.6V	24	1.5V
7	3V	25	2.6V
8	2.5V	26	2.6V
9	3.6V	27	2.5V
10	1.7V	28	2.6V
11	4V	29	2.6V
12	3.3V	30	2.6V
13	3.7V	31	2.6V
14	0V	32	2.6V
15	3.6V	33	2.6V
16	0V	34	2.6V
17	0V	35	2.6V
18	0V	36	2.6V

IC103

1	4.3V	15	2.5V
2	3.8V	16	2.5V
3	2.5V	17	4V
4	2.6V	18	4V
5	7.2V	19	2.5V
6	5.1V	20	2.6V
7	7.9V	21	7.8V
8	0V	22	7.9V
9	2.6V	23	2.6V
10	2.5V	24	NC
11	4V	25	2.6V
12	4V	26	4.2V
13	0V	27	3.8V
14	2.6V	28	0V

IC104

1	5V
2	0V
3	7.8V

IC110

1	PS
2	PS
3	PS
4	0V
5	2V
6	PS
7	PS
8	5V

IC203

1	2.5V
2	2.5V
3	2.4V
4	0V
5	2.4V
6	2.5V
7	2.5V
8	5V

IC502

1~4	0V
5	5V
6, 7	0V
8	5V

IC503

1	5V	9	PS
2	PS	10	0V
3	PS	11	5V
4	PS	12	PS
5	1.9V	13	PS
6	1.7V	14	0V
7	5V	15	5V
8	0V	16	5V

IC504

1	5V
2	4.9V
3	5V
4	NC
5	NC
6	NC
7	0V
8	4.8V

IC505

1	0V	9	5V
2	PS	10	NC
3	5V	11	PS
4	0V	12	0V
5	PS	13	5V
6	PS	14	5V
7	NC	15	0V
8	0V	16	5V

IC507

1	7.8V	8	NC
2	4.5V	9	4.5V
3	0V	10	0V
4	7.8V	11	7.8V
5	0V	12	0V
6	4.5V	13	4.5V
7	0V	14	0V

IC501

	AI-NET Mode			Mini-BUS Mode		
	POW-ON	POW-OFF	ACC-OFF	POW-ON	POW-OFF	ACC-OFF
1	5.08V	5.08V	0V	0V	0V	0V
2	0V	0V	0V	PS	PS	0V
3	4.78V	4.8V	0V	4.81V	4.81V	0V
4	NC	NC	NC	NC	NC	NC
5	5.08V	0V	0V	5.08V	0V	0V
6	0V	0V	0V	0V	0V	0V
7	5.08V	5.07V	5.13V	5.08V	5.07V	5.13V
8	PS	0V	0V	0V	0V	5.08V
9	0V	0V	0V	0V	0V	0V
10	5.08V	5.07V	0V	5.09V	5.07V	0V
11	5V	5V	0V	4.98V	4.95V	0V
12	4.97V	4.97V	0V	4.95V	4.9V	0V
13	5.08V	0V	0V	5.09V	0V	0V
14	5.08V	0V	0V	5.09V	0V	0V
15	5.08V	0V	0V	5.09V	0V	0V
16	5.08V	0V	0V	5.09V	0V	0V
17	5.07V	5.07V	0V	5.08V	0V	0V
18	0V	0V	0V	0V	0V	0V
19	0V	0V	0V	4.98V	4.95V	5.03V
20	NC	NC	NC	NC	NC	NC
21	NC	NC	NC	NC	NC	NC
22	4.95V	0V	0V	5V	0V	0V
23	0V	0V	0V	0V	0V	0V
24	0V	0V	0V	0V	0V	0V
25	0V	0V	0V	0V	0V	0V
26	0V	0V	0V	0V	0V	0V
27	NC	NC	NC	NC	NC	NC
28	4.98V	0V	0V	5.01V	0V	0V
29	4.94V	0V	0V	4.98V	0V	0V
30	4.94V	0V	0V	4.98V	0V	0V
31	5.07V	0V	0V	5.08V	0V	0V
32	0V	0V	0V	0V	0V	0V

	AI-NET Mode			Mini-BUS Mode		
	POW-ON	POW-OFF	ACC-OFF	POW-ON	POW-OFF	ACC-OFF
33	0V	5.08V	0V	0V	5.08V	0V
34	5V	0V	0V	5.08V	0V	0V
35	5V	5V	5V	5V	5V	5V
36	4.77V	4.79V	5.11V	4.81V	4.79V	5.01V
37	PS	0V	0V	PS	PS	5.08V
38	4.35V	4.38V	0V	4.39V	4.35V	0V
39	PS	0V	0V	PS	0V	0V
40	5.05V	5.07V	5.11V	5.08V	5.05V	5.12V
41	OSC	OSC	5.12V	OSC	OSC	5.12V
42	2.67V	2.63V	0V	2.67V	2.63V	0V
43	0V	0V	0V	0V	0V	0V
44	NC	NC	NC	NC	NC	NC
45	0V	0V	0V	0V	0V	0V
46	0V	0V	0V	0V	0V	0V
47	2.89V	0V	0V	2.89V	0V	0V
48	2.88V	0V	0V	3.04V	0V	0V
49	0V	0V	0V	0V	0V	0V
50	4.98V	0V	0V	5V	0V	0V
51	0V	0V	0V	0V	0V	0V
52	5.02V	5.03V	5.07V	4.99V	4.99V	5.08V
53	4.98V	0V	0V	5V	0V	0V
54	0V	0V	0V	0V	0V	0V
55	5.07V	5.08V	5.03V	5.04V	5.04V	5.11V
56	5.07V	0V	0V	5.02V	0V	0V
57	PS	0V	0V	PS	0V	0V
58	NC	NC	NC	NC	NC	NC
59	PS	0V	0V	PS	0V	0V
60	PS	5.08V	0V	0V	0V	0V
61	PS	5.08V	0V	0V	0V	0V
62	PS	0V	0V	4.98V	4.97V	0V
63	PS	0V	0V	0V	0V	0V
64	PS	5.08V	0V	0V	0V	0V

※ Pow-ON : at Play / POW-OFF : at Radio Mode

R-ch Signal Line
L-ch Signal Line
CD Signal Line
Focus Error Signal Line
Tracking Error Signal Line
Spindle Drive Signal Line
Sled Drive Signal Line

	E	C	B
Q103	3.9V	1.9V	3.3V
Q211	0V	0V	-0.3V
Q212	0V	0V	-0.3V
Q401	4.4V	11.5V	5V
Q505	5V	5V	0V
Q506	0V	0V	0.6V
Q507	11.8V	5V	11.2V
Q508	7.9V	5.1V	7.2V
Q511	5V	11.2V	5.5V
Q514	0V	0V	2.6V
Q540	0V	PS	PS
Q541	0V	PS	PS
Q542	5V	PS	PS
Q802	8V	13.7V	8.5V

	1	2	3	4	5
Q101	NC	-0.3V	13.6V	0V	0V
Q509	NC	5V	5V	5V	0V
Q512	NC	5V	5V	5V	0V
Q803	NC	13.6V	13.7V	5V	0V

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : Playing Music Disc at Room Temperature.

NOTE:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1{,}000{,}000}$

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
Capacitor : μF=microfarads,pF=picofarads

Abbreviations

RES.= Resistor	CAP.= Capacitor
C.F.= Carbon Film	ELY.= Electrolytic
M.F.= Metal Film	CER.= Ceramic
M.O.= Metal Oxide Film	MYL.= Mylar
M.P.= Metal Plate	TAN.= Tantalum
TR. = Transistor	POLY.= Polystyrol
TRANS.= Transformer	PP. = Polypropylene
CP. = Chip	PLT.= Polyethylene
	PF. = Polyester Film

Main P.C.Board

IC's

Symbol No.	Part No.	Description
IC101	51T65088W01	MN66271
IC102	51T65510W01	AN8806SB
IC103	51T65291W01	BA6790FP
IC104	51T11054W02	NJM78L05UA
IC110	51T73285F21	XRA10393F
IC203	51T16025W01	NJM2100M
IC501	51T85288W01	85288W01
IC502	51T85304W01	X24C16
IC503	51T55070W04	MB88385APF
IC504	51T35308W01	M62007FP
IC505	51T25370W01	MC14538BFEL
IC507	51T45571W02	LB1836M

Transistors

Symbol No.	Part No.	Description
Q101	48T73888F12	CP., FMC2
Q103	48T84234F03	2SB1238
Q211	48T63788F01	CP., 2SD1328
Q212	48T63788F01	CP., 2SD1328
Q401	48T80614F01	CP., 2SD1664
Q505	48T62966F01	CP., DTA143
Q506	48T63417F01	CP., 2SC2412K
Q507	48T84234F03	2SB1238
Q508	48T84234F03	2SB1238
Q509	48T73888F12	CP., FMC2
Q511	48T63417F01	CP., 2SC2412K
Q512	48T73888F12	CP., FMC2
Q514	48T62967F08	CP., DTC144WK
Q540	48T62967F03	CP., DTC124K
Q541	48T62967F04	CP., DTC144K
Q542	48T62966F04	CP., DTA144
Q802	48T65256W03	2SD2136
Q803	48T73888F12	CP., FMC2

Diodes

Symbol No.	Part No.	Description
D101	48T25651W02	CP., MA152WK
D102	48T15702W01	CP., SB05-05CP
D201	48T81063F01	CP., MA159
D501	48T63462F01	CP., DAN202K
D503	48T63463F01	CP., DAP202K
D506	48T95117F01	CP., MA713
D540	48T68828F11	1SS133
D598	48T81063F01	CP., MA159
D599	48T81063F01	CP., MA159
ZD501	48T25766W03	Zener, HZS6A3L
ZD502	48T25766W03	Zener, HZS6A3L
ZD504	48T45012W35	Zener, MTZJ7.5A
ZD505	48T45012W35	Zener, MTZJ7.5A
ZD506	48T25766W03	Zener, HZS6A3L
ZD540	48T25766W20	Zener, HZS9A2L
ZD801	48T25766W20	Zener, HZS9A2L

Crystals

Symbol No.	Part No.	Description
X101	91T25806W92	16.9344MHz
X501	91T15285W10	CER. Lock, 8.38MHz
X502	91T45118W12	4MHz

Switches

Symbol No.	Part No.	Description
S401	40T55182W03	Tact, SKHVBB (EJECT)
S701	40T45282W01	Slide, SLD-42-508 (Ai/STD)

LED / Coil

Symbol No.	Part No.	Description
LD401	48T75203W01	MBG4361F (GRN)
L801	24T65097W01	Coil, Choke

Thermistor

Symbol No.	Part No.	Description
TH501	48T93439F06	100K ohm

Capacitors

Symbol No.	Part No.	Description
C101	08T15399W01	CP., 0.022μF
E101	23S75372W02	ELY., 100μF / 10V
C102	08T15399W01	CP., 0.022μF
C103	08S82122F17	CP., 15pF
E103	23S75372W15	ELY., 1μF / 50V
C104	08S82122F17	CP., 15pF
E104	23T74437F21	TAN., 10μF / 10V
E105	23T74437F32	TAN., 10μF / 16V
C106	08S65128F57	CP., 1000pF
E106	23T74437F49	TAN., 1μF / 35V
C107	08T15399W03	CP., 0.047μF
C108	08S35374W01	CP., 0.1μF
C109	08S35374W01	CP., 0.1μF
C110	08S35374W01	CP., 0.1μF
C111	08S82122F55	CP., 560pF
C112	08S82122F37	CP., 100pF
C113	08T15399W04	CP., 0.027μF
E113	23S75372W02	ELY., 100μF / 10V
C114	08S65128F65	CP., 4700pF
C115	08S65128F61	CP., 2200pF
C117	08S65128F68	CP., 8200pF
C118	08T15399W04	CP., 0.027μF
C119	08S35374W01	CP., 0.1μF
C120	08S65128F69	CP., 0.01μF
C121	08S35374W01	CP., 0.1μF
C122	08S82122F51	CP., 390pF
C123	08S82122F29	CP., 47pF
C124	08S35374W01	CP., 0.1μF
C128	08T15399W04	CP., 0.027μF
E128	23T74437F30	TAN., 4.7μF / 16V
C130	08S35374W01	CP., 0.1μF
E130	23S75372W01	ELY., 330μF / 6.3V
E131	23S75372W16	ELY., 2.2μF / 50V
C132	08T15399W04	CP., 0.027μF
E132	23S75372W02	ELY., 100μF / 10V
C133	08S35374W01	CP., 0.1μF
C144	08S82122F61	CP., 1000pF
C145	08T15399W03	CP., 0.047μF
C191	08T15399W03	CP., 0.047μF
C201	08S82122F41	CP., 150pF
E201	23S75372W04	ELY., 10μF / 16V
C202	08S82122F41	CP., 150pF
E202	23S75372W04	ELY., 10μF / 16V
E203	23S75372W05	ELY., 22μF / 16V
E204	23S75372W05	ELY., 22μF / 16V
C205	08S82122F47	CP., 270pF
E205	23S75372W12	ELY., 0.33μF / 50V
C206	08S82122F47	CP., 270pF
C207	08S82122F59	CP., 820pF
C208	08S82122F59	CP., 820pF
C233	08S82122F57	CP., 680pF
C234	08S82122F57	CP., 680pF
C401	08S35374W01	CP., 0.1μF
C402	08S65128F62	CP., 2700pF
C403	08S82122F43	CP., 180pF
C501	08T15399W03	CP., 0.047μF
C502	08T15399W03	CP., 0.047μF
C503	08S35374W01	CP., 0.1μF
C504	08S35374W01	CP., 0.1μF
E504	23S75372W15	ELY., 1μF / 50V
C505	08S82122F19	CP., 18pF
C506	08S35374W01	CP., 0.1μF
C507	08S35374W01	CP., 0.1μF
C508	08S35374W01	CP., 0.1μF
C509	08S82122F19	CP., 18pF
C510	08S35374W01	CP., 0.1μF
E510	23S75372W06	ELY., 33μF / 16V
C511	08S35374W01	CP., 0.1μF
E511	23S75372W02	ELY., 100μF / 10V
C512	08S82122F37	CP., 100pF
C513	08S82122F37	CP., 100pF
C514	08S35374W01	CP., 0.1μF
C515	08S35374W01	CP., 0.1μF
C516	08S65128F63	CP., 3300pF
C520	08T55401W01	TF, 1000pF
C521	08S65128F57	CP., 1000pF
C540	08S82122F51	CP., 390pF
C801	08T15399W04	CP., 0.027μF
E801	23T75427W01	ELY., 470μF / 16V
E802	23S75372W03	ELY., 220μF / 10V
E803	23S75372W06	ELY., 33μF / 16V
E804	23S75372W07	ELY., 47μF / 16V
C805	08T15399W04	CP., 0.027μF
E808	23S75372W03	ELY., 220μF / 10V

Resistors

(All resistors are chip 1/10W±5% unless otherwise noted.)

Symbol No.	Part No.	Description
R101	06S64995F75	8.2K ohm
R102	06S64996F10	220K ohm
R103	06S64996F02	100K ohm
R104	06S64995F85	22K ohm
R105	06S64995F91	39K ohm
R106	06S64996F06	150K ohm
R107	06S64995F77	10K ohm
R109	06S64996F04	120K ohm
R110	06S64996F26	1M ohm
R111	06S64996F02	100K ohm
R112	06S64995F45	470 ohm
R113	06S64995F86	24K ohm
R114	06S64995F57	1.5K ohm

Symbol No.	Part No.	Description
E103	23S75372W15	ELY., 1µF / 50V
C104	08S82122F17	CP., 15pF
E104	23T74437F21	TAN., 10µF / 10V
E105	23T74437F32	TAN., 10µF / 16V
C106	08S65128F57	CP., 1000pF
E106	23T74437F49	TAN., 1µF / 35V
C107	08T15399W03	CP., 0.047µF
C108	08S35374W01	CP., 0.1µF
C109	08S35374W01	CP., 0.1µF
C110	08S35374W01	CP., 0.1µF
C111	08S82122F55	CP., 560pF
C112	08S82122F37	CP., 100pF
C113	08T15399W04	CP., 0.027µF
E113	23S75372W02	ELY., 100µF / 10V
C114	08S65128F65	CP., 4700pF
C115	08S65128F61	CP., 2200pF
C117	08S65128F68	CP., 8200pF
C118	08T15399W04	CP., 0.027µF
C119	08S35374W01	CP., 0.1µF
C120	08S65128F69	CP., 0.01µF
C121	08S35374W01	CP., 0.1µF
C122	08S82122F51	CP., 390pF
C123	08S82122F29	CP., 47pF
C124	08S35374W01	CP., 0.1µF
C128	08T15399W04	CP., 0.027µF
E128	23T74437F30	TAN., 4.7µF / 16V
C130	08S35374W01	CP., 0.1µF
E130	23S75372W01	ELY., 330µF / 6.3V
E131	23S75372W16	ELY., 2.2µF / 50V
C132	08T15399W04	CP., 0.027µF
E132	23S75372W02	ELY., 100µF / 10V
C133	08S35374W01	CP., 0.1µF
C144	08S82122F61	CP., 1000pF
C145	08T15399W03	CP., 0.047µF
C191	08T15399W03	CP., 0.047µF
C201	08S82122F41	CP., 150pF
E201	23S75372W04	ELY., 10µF / 16V
C202	08S82122F41	CP., 150pF
E202	23S75372W04	ELY., 10µF / 16V
E203	23S75372W05	ELY., 22µF / 16V
E204	23S75372W05	ELY., 22µF / 16V
C205	08S82122F47	CP., 270pF
E205	23S75372W12	ELY., 0.33µF / 50V
C206	08S82122F47	CP., 270pF
C207	08S82122F59	CP., 820pF
C208	08S82122F59	CP., 820pF
C233	08S82122F57	CP., 680pF
C234	08S82122F57	CP., 680pF
C401	08S35374W01	CP., 0.1µF

Symbol No.	Part No.	Description
C402	08S65128F62	CP., 2700pF
C403	08S82122F43	CP., 180pF
C501	08T15399W03	CP., 0.047µF
C502	08T15399W03	CP., 0.047µF
C503	08S35374W01	CP., 0.1µF
C504	08S35374W01	CP., 0.1µF
E504	23S75372W15	ELY., 1µF / 50V
C505	08S82122F19	CP., 18pF
C506	08S35374W01	CP., 0.1µF
C507	08S35374W01	CP., 0.1µF
C508	08S35374W01	CP., 0.1µF
C509	08S82122F19	CP., 18pF
C510	08S35374W01	CP., 0.1µF
E510	23S75372W06	ELY., 33µF / 16V
C511	08S35374W01	CP., 0.1µF
E511	23S75372W02	ELY., 100µF / 10V
C512	08S82122F37	CP., 100pF
C513	08S82122F37	CP., 100pF
C514	08S35374W01	CP., 0.1µF
C515	08S35374W01	CP., 0.1µF
C516	08S65128F63	CP., 3300pF
C520	08T55401W01	TF, 1000pF
C521	08S65128F57	CP., 1000pF
C540	08S82122F51	CP., 390pF
C801	08T15399W04	CP., 0.027µF
E801	23T75427W01	ELY., 470µF / 16V
E802	23S75372W03	ELY., 220µF / 10V
E803	23S75372W06	ELY., 33µF / 16V
E804	23S75372W07	ELY., 47µF / 16V
C805	08T15399W04	CP., 0.027µF
E808	23S75372W03	ELY., 220µF / 10V

Resistors

(All resistors are chip 1/10W±5% unless otherwise noted.)

R101	06S64995F75	8.2K ohm
R102	06S64996F10	220K ohm
R103	06S64996F02	100K ohm
R104	06S64995F85	22K ohm
R105	06S64995F91	39K ohm
R106	06S64996F06	150K ohm
R107	06S64995F77	10K ohm
R109	06S64996F04	120K ohm
R110	06S64996F26	1M ohm
R111	06S64996F02	100K ohm
R112	06S64995F45	470 ohm
R113	06S64995F86	24K ohm
R114	06S64995F57	1.5K ohm

Symbol No.	Part No.	Description
R115	06S64995F93	47K ohm
R116	06S64995F29	100 ohm
R117	06S64995F29	100 ohm
R118	06S64995F53	1K ohm
R124	06S64996F10	220K ohm
R126	06S64995F81	15K ohm
R127	06S64995F77	10K ohm
R130	06S64995F77	10K ohm
R131	06S64995F81	15K ohm
R136	06S64995F61	2.2K ohm
R141	06S70072F15	27 ohm 1/4W
R191	06S64995F69	4.7K ohm
R192	06S64995F69	4.7K ohm
R193	06S64995F69	4.7K ohm
R194	06S64995F77	10K ohm
R197	06S64995F25	68 ohm
R201	06S64995F72	6.2K ohm
R202	06S64995F72	6.2K ohm
R203	06S64995F82	16K ohm
R204	06S64995F82	16K ohm
R207	06S64995F61	2.2K ohm
R208	06S64995F61	2.2K ohm
R209	06S64995F81	15K ohm
R210	06S64995F81	15K ohm
R213	06S64995F50	750 ohm
R214	06S64995F50	750 ohm
R225	06S64995F86	24K ohm
R226	06S64995F86	24K ohm
R227	06S64995F21	47 ohm
R228	06S64995F21	47 ohm
R229	06S64995F78	11K ohm
R230	06S64995F78	11K ohm
R235	06S64995F50	750 ohm
R241	06S64996F10	220K ohm
R242	06S64996F10	220K ohm
R401	06S70072F46	510 ohm 1/4W
R402	06S70072F49	680 ohm 1/4W
R501	06S64996F02	100K ohm
R502	06S64995F57	1.5K ohm
R503	06S64995F57	1.5K ohm
R504	06S70072F37	220 ohm 1/4W
R506	06S64995F93	47K ohm
R507	06S64995F93	47K ohm
R508	06S64995F93	47K ohm
R509	06S64995F93	47K ohm
R512	06S64995F89	33K ohm
R513	06S64995F92	43K ohm
R514	06S64995F77	10K ohm
R515	06S53331F41	1 ohm 1/8W

Symbol No.	Part No.	Description
R517	06S64995F85	22K ohm
R518	06S64995F50	750 ohm
R520	06S64995F75	8.2K ohm
R521	06S64996F14	330K ohm
R522	06S64996F26	1M ohm
R523	06S64996F18	470K ohm
R530	06S64995F85	22K ohm
R535	06S64995F93	47K ohm
R536	06S64995F93	47K ohm
R540	06S64995F85	22K ohm
R541	06S53330F85	22K ohm 1/8W
R542	06S70072F37	220 ohm 1/4W
R560	06S64995F69	4.7K ohm
R561	06S64995F69	4.7K ohm
R562	06S64995F69	4.7K ohm
R563	06S64995F69	4.7K ohm
R564	06S64995F69	4.7K ohm
R565	06S64995F69	4.7K ohm
R566	06S70072F34	160 ohm 1/4W
R567	06S70072F34	160 ohm 1/4W
R568	06S70072F34	160 ohm 1/4W
R569	06S70072F34	160 ohm 1/4W
R570	06S64995F61	2.2K ohm
R571	06S64995F61	2.2K ohm
R573	06S64995F87	27K ohm
R574	06S64995F81	15K ohm
R575	06S64995F77	10K ohm
R576	06S64995F93	47K ohm
R577	06S64995F93	47K ohm
R578	06S64995F93	47K ohm
R579	06S64995F77	10K ohm
R580	06S64995F77	10K ohm
R603	06S64995F93	47K ohm
R604	06S64995F93	47K ohm
R701	06S64996F02	100K ohm
R801	06S70072F34	160 ohm 1/4W
R802	06S70072F34	160 ohm 1/4W
R812	06S70072F27	82 ohm 1/4W

Connector P.C.Board

Diode

D801	48T68580F02	DSA3A4

Capacitors

C203	08S65128F35	CP., 100pF
E520	23S61523F25	ELY., 0.1µF / 50V

Symbol No.	Part No.	Description
Resistors		(All resistors are chip 1/4W±5% unless otherwise noted.)
R233	06S70072F05	10 ohm
R234	06S70072F05	10 ohm
R544	06S70072F45	470 ohm
Miscellaneous		
ET801	01T55619W08	Assy., Ai-NET Connector
HD101	88T55261W01	Pick-Up Unit
M101	59T65085W01	Motor, Load 7V-370mA (LOADING)
M102	59T65085W01	Motor, Load 7V-370mA (ELEVATOR)
M103	59T65085W01	Motor, Load 7V-370mA (SLED)
M104	01V83900W16	Assy., Spindle Motor 2V-90mA (SPINDLE)
S101	40T35543W02	Switch, Detector (UNLOAD)
S102	40T35543W02	Switch, Detector (LOADING)
S104	40T15222W01	Switch, Detector (MAGAZINE IN)
S105	40T71025F01	Switch, Detector (LIMIT)
VR101	18T55678W01	Volume, Slide RS32111 10K ohm

Symbol No.	Part No.	Description

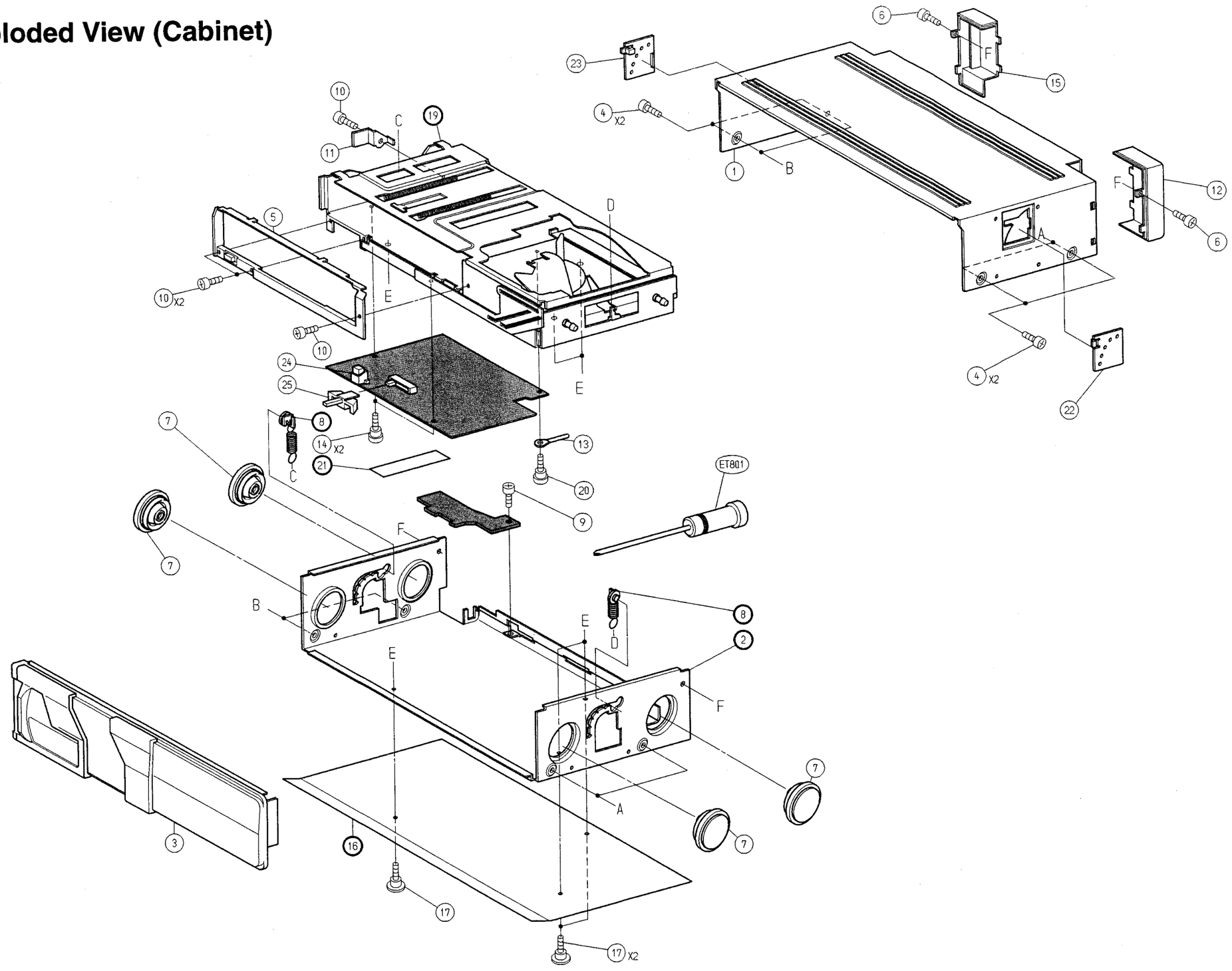
Cabinet Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
1	1-E	15D81140W01	Cover, Top
3	5-B	13C81134W01	Assy., Front Escutcheon
4		03A61184W03	Screw, Bind (M2.6X4)
5	2-B	64B60211W04	Assy., Plate Inner
6		03S44205G34	Screw, Pan (M2.6X5)
7		75C80391W01	Damper, DT (C)
9	3-D	03S44205G62	Screw, Bind (M2.6X5)
10		03S94385F48	Screw, Pan Nylok (M2X4)
11	1-C	07A81403W01	Bracket, Transistor
12	2-G	15C81141W01	Cover, Side (R)
13	3-D	29C41045P02	Lug, Wrap Around
14	3-C	03A38056W01	Screw, Special (M2.6X6)
15	1-F	15C81141W02	Cover, Side (L)
17		03A68008W03	Screw, Transport (M3X10.7)
20	3-D	03A38056W02	Screw, Special (M2.6X6)
22	3-F	15B81142W01	Cover, Spring (R)
23	1-D	15B81142W02	Cover, Spring (L)
24	2-C	43A70497W01	Spacer, LED
25	3-C	36A81548W01	Knob, Switch

Symbol No.	Index	Part No.	Description

Exploded View (Cabinet)



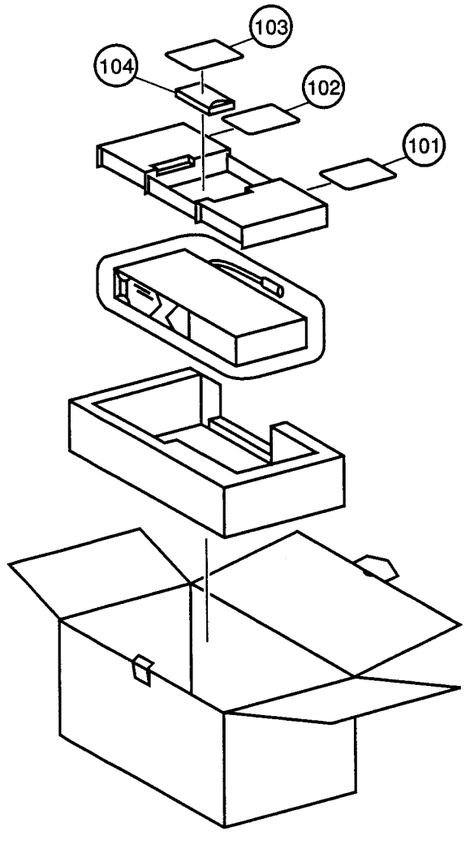
Packing Assembly Parts List

Symbol No.	Part No.	Description
○ 101	01C71646W02	Assy., Kit Installation
△ 101	01C71646W02	Assy., Kit Installation
□ 101	01C71646W01	Assy., Kit Installation
102	01T55561W34	Assy., DIN Connector
○ 103	68P80683W67	Owner's Manual
△ 103	68P80683W67	Owner's Manual
△ 103	68P80683W68	Owner's Manual (I/G/S)
□ 103	68P80683W69	Owner's Manual (J)
104	01D00560K01	Assy., Magazine

Symbol No.	Part No.	Description

NOTE : ○: For North American Model Only, △: For General Foreign Model Only,
□: For Japanese Model Only, Others : Common.

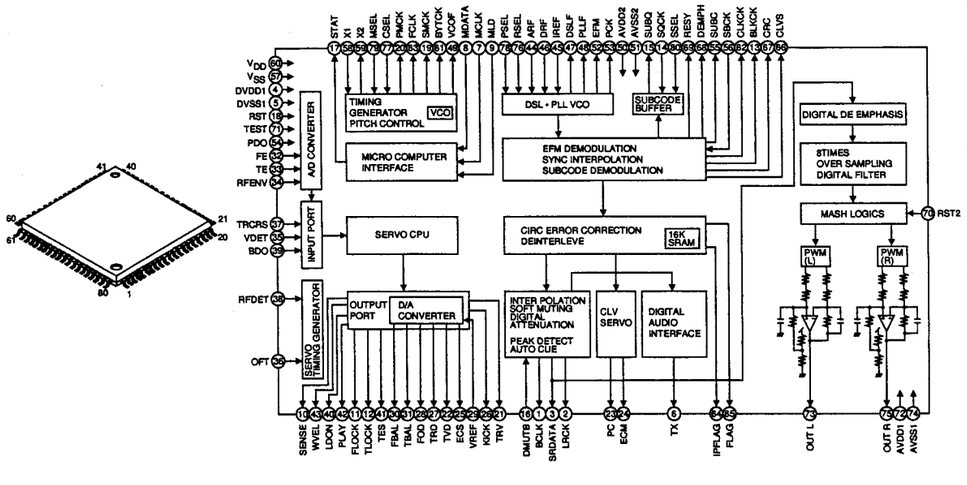
Packing Method View



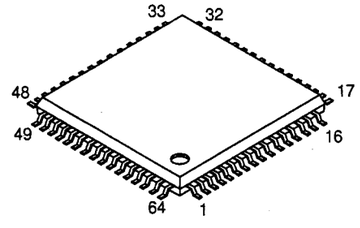
Semi-Conductor Lead Identifications

NOTE : For the parts not mentioned, refer to the Schematic Diagram.

MN66271 : IC101



85288W01 : IC501



PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	Ai-RST	O	17	EJLED	O	33	A MUTE	O	49	DOSW	I
2	Min-OUT	O	18	V_{SS}	—	34	VCONT	O	50	ULDSW	I
3	ACC-IN	I	19	BUS-SW	I	35	RESET	I	51	LODSW	I
4	NC	—	20	NC	—	36	B-HOLD	I	52	MAGSW	I
5	RST2	O	21	NC	—	37	BUS-IN	I	53	LMT SW	I
6	SCL	I/O	22	STAT	I	38	A-HOLD	I	54	EJKEY	I
7	SDA	I/O	23	TLOCK	I	39	BLKCK	I	55	AV_{DD}	—
8	Ai-DET	I	24	V_{SS}	—	40	V_{DD}	—	56	AV_{REF}	—
9	V_{SS}	—	25	FLOCK	I	41	X2	—	57	SUB-Q	I
10	A0	O	26	SENSE	I	42	X1	I	58	NC	—
11	A1	O	27	NC	—	43	V_{SS}	—	59	SQCK	O
12	A2	O	28	MLD	O	44	NC	—	60	Ai-RS	O
13	ELVM+	O	29	MDATA	O	45	V_{SS}	—	61	Ai-R/W	O
14	ELVM -	O	30	MCLK	O	46	AV_{SS}	—	62	Ai-SIN	I
15	LODM+	O	31	XRST	O	47	LPS	I	63	Ai-SOUT	O
16	LODM -	O	32	D MUTE	O	48	TEMP	I	64	Ai-SCLK	O

ALPINE®

SERVICE MANUAL

ALPI-00426

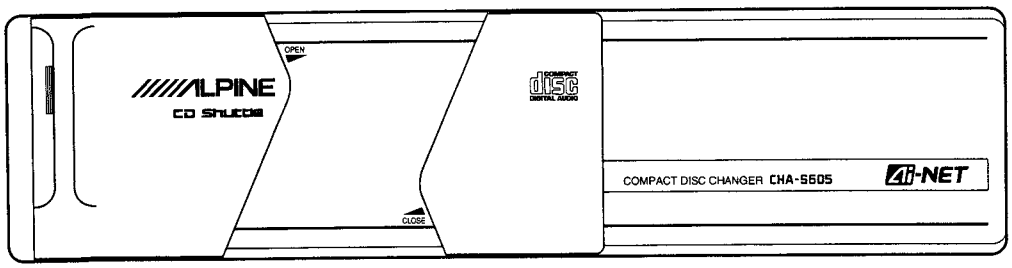
Compact Disc Remote Changer

CD Shuttle

COMPACT disc DIGITAL AUDIO

- The model described in this manual is developed from Model 5960.
  For information that is not mentioned in this service manual, refer to the Service Manual • 5960 (68P61020W02). VJ8134
- For the CD deck mechanism parts (DT24A010) of this model, refer to the Service Manual • DT Series (68P61023W01).

- 当モデルは、5960がベースモデルとなっております。このマニュアルは相違点のみを記載しておりますので、詳細については、5960 (68P61020W02) のサービスマニュアルを参照願います。
- 本機のCDメカニズム (DT24A010) についての資料は、サービスマニュアル・DTシリーズ (68P61023W01) を参照願います。



Ai-NET

サービス費用区分	A
技術資料No.	MC-42-0

CHA-S605

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Packing Assembly Parts List 19

Specifications
Servo Monitor
Packing Method View

Refer to the Service Manual · 5960 (68P61020W02).
サービスマニュアル・5960 (68P61020W02)を参照願います。

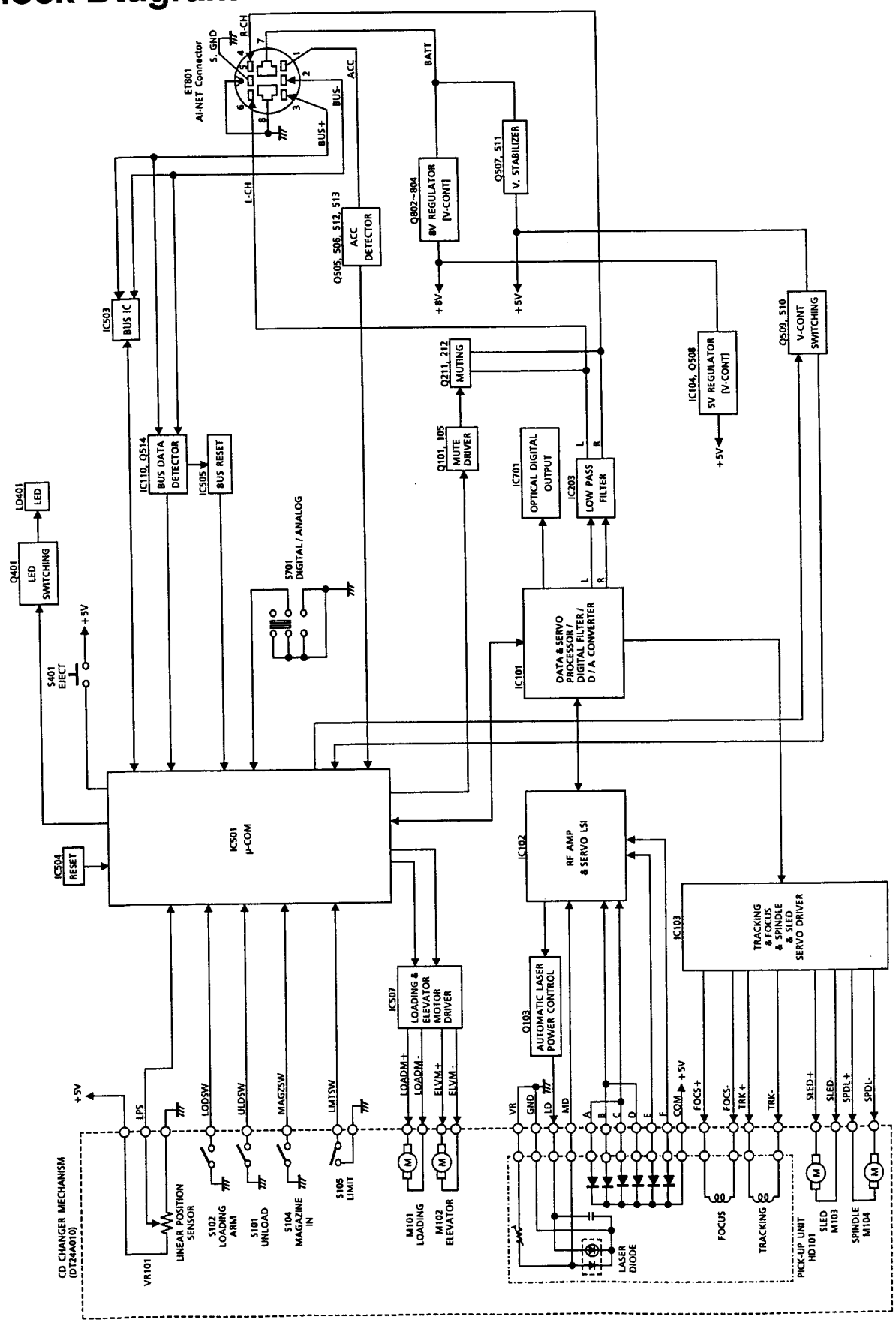
Description of IC Terminal

○ 75099W08, △□ 65478W01 (IC501)

No.	Symbol	I / O	Terminal Description
1	MAGSW	I	Magazine detect switch.
2	LMTSW	I	Limit switch.
3	NC	—	N.C.
4	GND	—	GND.
5	NC	—	N.C.
6	PULL UP	—	Pull up terminal.
7	+5V	—	+5V. (BATT)
8	NC	—	N.C.
9	BUS - DET	I	BUS communication detection.
10	NC	—	N.C.
11	SUB - Q	I	SUBQ Input.
12	J - RST	O	MB88385APF (IC503) reset output.
13	SQCK	O	SQCK clock output.
14	J - RS	O	MB88385APF (IC503) register choice output.
15	J - R / W	O	MB88385APF (IC503) register Read / Write choice output.
16	J - SIN	I	Serial data input.
17	J - SOUT	O	Serial data output.
18	J - SCLK	O	Serial data clock output.
19	A0	O	Auto adjustment monitor output. (LATCH)
20	A1	O	Auto adjustment monitor output. (CLOCK)
21	A2	O	Auto adjustment monitor output. (DATA)
22	ELVM+	O	Elevator motor (+) output.
23	ELVM -	O	Elevator motor (-) output.
24	LODM+	O	Loading motor (+) output.
25	LODM -	O	Loading motor (-) output.
26 27	NC	—	N.C.
28	MLD	O	LSI Control latch output.
29	MDATA	O	LSI Control data output.
30	MCLK	O	LSI Control clock.
31	STAT	I	NM66271 (IC101) status signal input.
32	TLOCK	I	MN66271 (IC101) tracking servo pull in signal input.
33	GND	—	GND.
34	FLOCK	I	Focus servo pull in signal input.
35	SENSE	I	Sense signal input.
36 ⟆ 39	NC	—	N.C.
40	XRST	O	Surroundings IC reset.
41	DMUTE	O	Digital MUTE output.
42	AMUTE	O	Analog MUTE output.
43	VCONT	O	Power supply control.
44	RST2	O	Analog reset output.
45	LEDCNT	O	LED control output.
46 ⟆ 59	NC	—	N.C.
60	$\overline{\text{RESET}}$	I	System reset input.
61	GND	—	GND.
62	BATT	I	BATT Detect.

No.	Symbol	I / O	Terminal Description
63	ACC	I	ACC Detect.
64	BLKCK	I	Sub code block clock input.
65	J - IRQ	I	MB88385APF (IC503) data detect input.
66	EJECT	I	Eject KEY input.
67	NC	—	N.C.
68	V_{DD}	—	+5V.
69	X2	—	System clock 2. (4.19MHz)
70	X1	—	System clock 1. (4.19MHz)
71	GND	—	GND.
72	NC	—	N.C.
73	GND	—	GND.
74	AV_{DD}	—	+5V. (BATT)
75	+5V	—	+5V. (VCONT)
76	LPS	I	Linear position sensor.
77	TEMP	I	Temperature detect sensor.
78	DOSW	I	Light ON / OFF switch.
79	ULDSW	I	Unloading detect switch.
80	LODSW	I	Loading detect switch.

Block Diagram



MEMO

Parts Layout on P.C. Boards and Wiring Diagram

All P.C. Boards viewed from soldered side.

Switch P. C. Board

FPC Switch P. C. Board

Main P. C. Board

Spindle Motor
(M104)

Loading Motor
(M101)

Pick-Up Unit
(HD101)

To CB502

To CB503

Connector P. C. Boc

Elevator P. C. Board

Elevator Motor
(M102)

To CB801

To CB501

To CH501

To CB802

WHT(3)
WHT(2)
WHT(1)
BRN

A | B | C | D | E | F | G | H

ıgram

All P.C. Boards viewed from soldered side.

P. C. Board

Spindle Motor
(M104)

Sled Motor (M103)

S105

FPC Drive P. C. Board

Loading Motor
(M101)

Pick-Up Unit
(HD101)

To CB502

To CB503

Elevator P. C. Board

S104

CH501

To CB501

To CH501

WHT(3)
WHT(2)
WHT(1)
BRN

Elevator Motor
(M102)

Connector P. C. Board

IC701

To CB802

To CB803

SHLD(S.GND)
BLU(L-ch)
GRN(R-ch)
WHT(BUS-)
RED(BUS+)
SHLD(GND)

SHLD(GND)
GRY(1)
GRY(2)
ORG(ACC)
YEL(BATT)

BLU

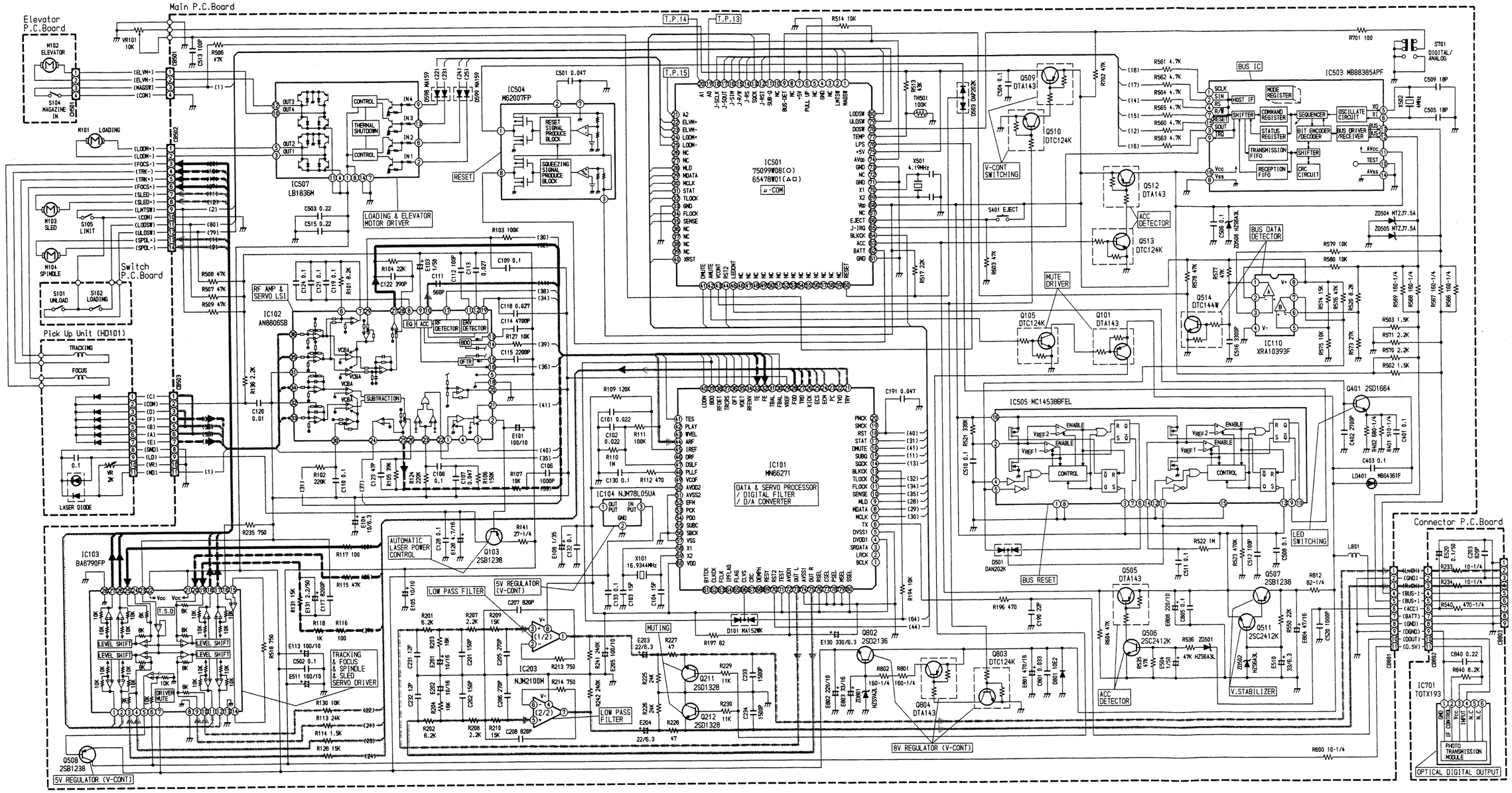
Ai-NET Connector
ET801

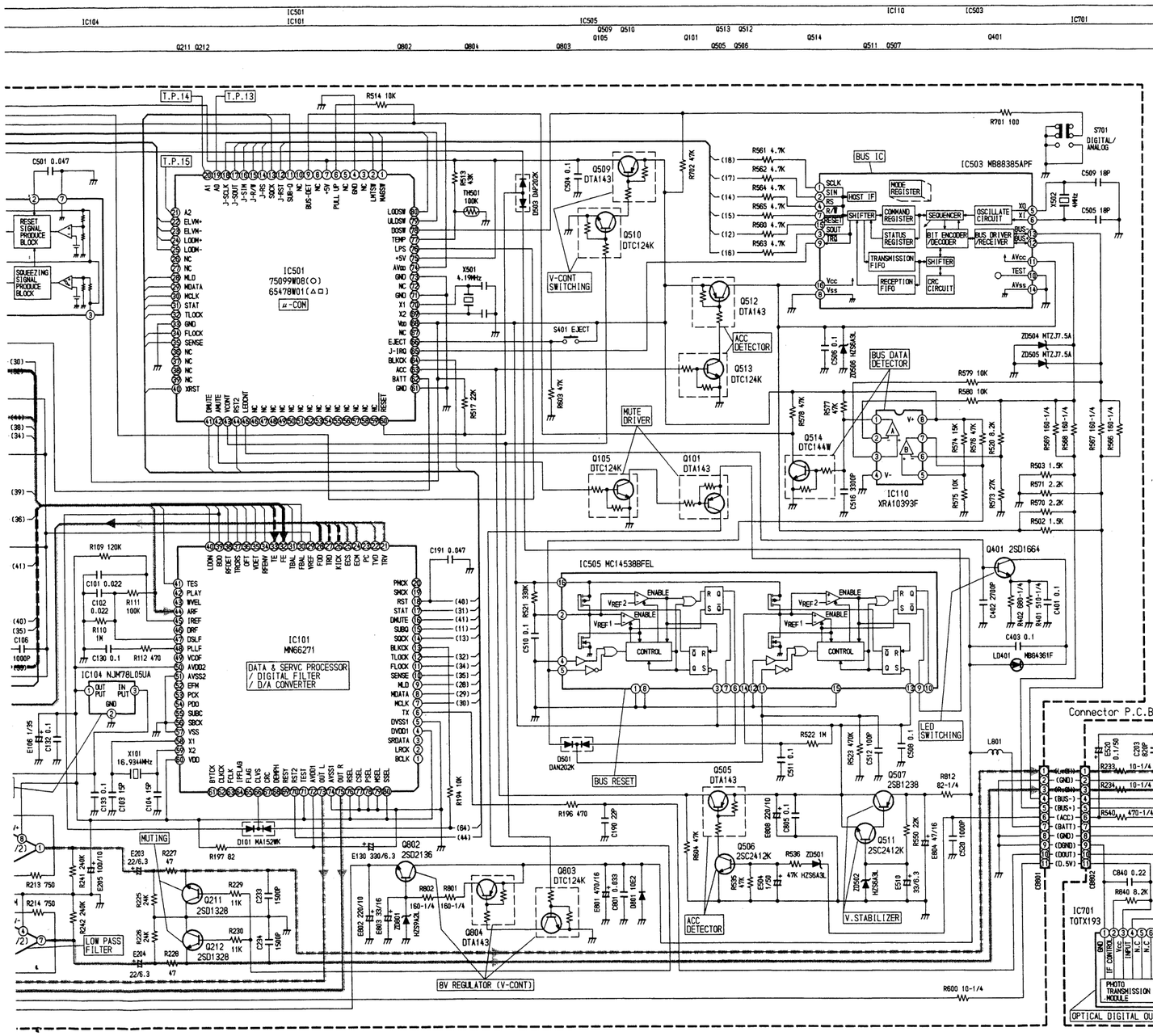
Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

CHA-S605 CHA-S605

Schematic Diagram

IC	IC102 IC507 IC504 IC501 IC505 IC110 IC503 IC701
	IC103 IC203 IC104 IC101
Transistor (Q)	Q508 Q103 Q211 Q212 Q802 Q804 Q803 Q509 Q510 Q105 Q101 Q513 Q512 Q505 Q506 Q514 Q511 Q507 Q401





IC101

1	NC	21	2.5V	41	0V	61	NC
2	NC	22	2.5V	42	NC	62	NC
3	NC	23	NC	43	NC	63	NC
4	5V	24	2.5V	44	2.6V	64	NC
5	0V	25	2.5V	45	1.5V	65	NC
6	0V	26	2.5V	46	NC	66	5V
7	PS	27	2.6V	47	2.6V	67	NC
8	PS	28	2.6V	48	2.1V	68	NC
9	PS	29	2.5V	49	NC	69	NC
10	0V	30	2.1V	50	5V	70	5V
11	0V	31	2.5V	51	0V	71	5V
12	0V	32	2.5V	52	NC	72	5V
13	PS	33	2.5V	53	NC	73	2.5V
14	PS	34	2.5V	54	NC	74	0V
15	PS	35	0V	55	NC	75	2.5V
16	0V	36	0V	56	0V	76	5V
17	5V	37	PS	57	0V	77	0V
18	5V	38	0V	58	PS	78	0V
19	NC	39	0V	59	PS	79	0V
20	NC	40	5V	60	5V	80	5V

IC102

1	0.2V	19	2.5V
2	3.2V	20	2.5V
3	5V	21	0V
4	NC	22	0V
5	5V	23	2.4V
6	2.5V	24	PS
7	2.9V	25	2.5V
8	2.5V	26	2.5V
9	3.7V	27	2.5V
10	1.6V	28	2.5V
11	3.9V	29	2.5V
12	3.3V	30	2.5V
13	3.6V	31	2.5V
14	0V	32	2.5V
15	3.6V	33	2.5V
16	0V	34	2.5V
17	0V	35	2.5V
18	0V	36	2.5V

IC103

1	PS	15	2.5V
2	PS	16	2.5V
3	2.5V	17	4.1V
4	2.5V	18	4.1V
5	7.4V	19	2.5V
6	5V	20	2.5V
7	8V	21	8V
8	0V	22	8V
9	2.5V	23	2.5V
10	2.5V	24	2.5V
11	PS	25	2.6V
12	PS	26	4.3V
13	0V	27	4V
14	2.5V	28	0V

IC104

1	5V
2	0V
3	8V

IC110

1	PS
2	PS
3	PS
4	0V
5	2V
6	PS
7	PS
8	5V

IC203

1	2.5V
2	2.5V
3	2.5V
4	0V
5	2.5V
6	2.5V
7	2.5V
8	5V

IC503

1	5V	9	PS
2	PS	10	0V
3	PS	11	5V
4	PS	12	PS
5	1.9V	13	PS
6	1.7V	14	0V
7	5V	15	5V
8	0V	16	5V

IC504

1	5V
2	4.8V
3	5V
4	NC
5	NC
6	NC
7	0V
8	5V

IC505

1	0V	9	5V
2	PS	10	NC
3	5V	11	PS
4	0V	12	0V
5	PS	13	5V
6	PS	14	5V
7	NC	15	0V
8	0V	16	5V

IC501

1	5V	17	PS	33	0V	49	NC	65	PS
2	5V	18	PS	34	0V	50	NC	66	0V
3	NC	19	PS	35	0V	51	NC	67	NC
4	0V	20	PS	36	NC	52	NC	68	5V
5	NC	21	PS	37	NC	53	NC	69	PS
6	PS	22	5V	38	NC	54	NC	70	PS
7	5V	23	5V	39	NC	55	NC	71	0V
8	NC	24	5V	40	5V	56	NC	72	NC
9	PS	25	5V	41	0V	57	NC	73	0V
10	NC	26	NC	42	0V	58	NC	74	5V
11	PS	27	NC	43	5V	59	NC	75	5V
12	5V	28	PS	44	5V	60	5V	76	1.7V
13	PS	29	PS	45	5V	61	0V	77	2.7V
14	PS	30	PS	46	NC	62	5V	78	5V
15	PS	31	5V	47	NC	63	5V	79	5V
16	PS	32	0V	48	NC	64	PS	80	0V

IC507

1	8V
2	4.5V
3	0V
4	8V
5	0V
6	4.5V
7	0V
8	NC
9	4.5V
10	0V
11	8V
12	0V
13	4.5V
14	0V

IC701

1	0V
2	2.1V
3	4.9V
4	0.1V
5	NC
6	NC

	E	C	B		E	C	B
Q101	13.6V	-0.3V	13.6V	Q509	5V	5V	0V
Q103	3.8V	1.9V	3.2V	Q510	0V	0V	5V
Q105	0V	13.6V	0V	Q511	5V	11.2V	5.5V
Q211	0V	0V	-0.3V	Q512	5V	5V	0V
Q212	0V	0V	-0.3V	Q513	0V	0V	5V
Q401	4.4V	11.5V	5V	Q514	0V	0V	2.6V
Q505	5V	5V	0V	Q802	8V	13.7V	8.5V
Q506	0V	0V	0.6V	Q803	0V	0V	5V
Q507	11.8V	5V	11.2V	Q804	13.7V	13.6V	0V
Q508	8V	5V	7.4V				

Measuring Conditions

1. Power Supply Voltage : DC14.4V
2. Measuring Meter : Digital Multi Meter
3. Measuring Reference Point : Between Ground
4. Measuring Condition : Playing Disc No.1 at Room Temperature

NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1{,}000{,}000}$

Electrical Parts List

Resistor : Carbon resistors under 1 / 4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF = microfarads, pF = picofarads

Abbreviations

RES.=	Resistor	CAP.=	Capacitor
C.F.=	Carbon Film	ELY.=	Electrolytic
M.F.=	Metal Film	CER.=	Ceramic
M.O.=	Metal Oxide Film	MYL.=	Mylar
M.P.=	Metal Plate	TAN.=	Tantalum
TR.=	Transistor	POLY.=	Polystyrol
TRANS.=	Transformer	PP.=	Polypropylene
CP.=	Chip	PLT.=	Polyethylene
		PF.=	Polyester Film

Main P. C. Board

IC's

	Symbol No.	Part No.	Description
	IC101	51T65088W01	MN66271
	IC102	51T65510W01	AN8806SB
	IC103	51T65291W01	BA6790FP
	IC104	51T11054W02	NJM78L05UA
	IC110	51T73285F21	XRA10393F
	IC203	51T16025W01	NJM2100M
○	IC501	51T75099W08	75099W08
△	IC501	51T65478W01	65478W01
□	IC501	51T65478W01	65478W01
	IC503	51T55070W04	MB88385APF
	IC504	51T35308W01	M62007FP
	IC505	51T25370W01	MC14538BFEL
	IC507	51T45571W02	LB1836M

Transistors

	Symbol No.	Part No.	Description
	Q101	48T62966F01	CP., DTA143
	Q103	48T84234F03	2SB1238
	Q105	48T62967F03	CP., DTC124K
	or	48T64222F02	CP., UN2212
	Q211	48T63788F01	CP., 2SD1328
	Q212	48T63788F01	CP., 2SD1328
	Q401	48T80614F01	CP., 2SD1664
	Q505	48T62966F01	CP., DTA143
	Q506	48T63417F01	CP., 2SC2412K
	Q507	48T84234F03	2SB1238
	Q508	48T84234F03	2SB1238
	Q509	48T62966F01	CP., DTA143
	Q510	48T62967F03	CP., DTC124K
	or	48T64222F02	CP., UN2212
	Q511	48T63417F01	CP., 2SC2412K
	Q512	48T62966F01	CP., DTA143
	Q513	48T62967F03	CP., DTC124K
	or	48T64222F02	CP., UN2212
	Q514	48T62967F08	CP., DTC144W
	Q802	48T65256W03	2SD2136
	Q803	48T62967F03	CP., DTC124K
	or	48T64222F02	CP., UN2212
	Q804	48T62966F01	CP., DTA143

Diodes

	Symbol No.	Part No.	Description
	D101	48T25651W02	CP., MA152WK
	D501	48T63462F01	CP., DAN202K
	D503	48T63463F01	CP., DAP202K
	D598	48T81063F01	CP., MA159
	D599	48T81063F01	CP., MA159
	D801	48T81044F01	10E2
	ZD501	48T25766W03	Zener, HZS6A3L
	ZD502	48T25766W03	Zener, HZS6A3L
	ZD504	48T45012W35	Zener, MTZJ7.5A
	ZD505	48T45012W35	Zener, MTZJ7.5A
	ZD506	48T25766W03	Zener, HZS6A3L
	ZD801	48T25766W20	Zener, HZS9A2L

LED / Coil

Symbol No.	Part No.	Description
LD401	48T75203W01	MBG4361F (GRN)
L801	24T65097W01	Coil, Choke

Crystals

Symbol No.	Part No.	Description
X101	91T25806W92	16.9344MHz
X501	91T15285W01	CER., Lock 4.19MHz
X502	91T45118W12	4MHz

Switchs / Thermistor

Symbol No.	Part No.	Description
S401	40T55182W03	Tact, SKHVBB (EJECT)
S701	40T16358W05	Slide, SSSS922N (DIGITAL / ANALOG)
TH501	48T93439F06	Thermistor, 100K ohm

Capacitors

Symbol No.	Part No.	Description
C101	08T15399W01	CP., 0.022μF
E101	23T55402W13	ELY., 100μF / 10V

Notes : ○ : For North American Model Only,
□ : For Japanese Model Only,
△ : For General Foreign Model Only,
Others : Common.

Symbol No.	Part No.	Description
C102	08T15399W01	CP., 0.022µF
C103	08S82122F17	CP., 15pF
E103	23S61523F29	ELY., 1µF / 50V
C104	08S82122F17	CP., 15pF
E104	23T74437F11	TAN., 10µF / 6.3V
E105	23T74437F21	TAN., 10µF / 10V
C106	08S65128F57	CP., 1000pF
E106	23T74437F49	TAN., 1µF / 35V
C107	08T15399W03	CP., 0.047µF
C108	08T35374W01	CP., 0.1µF
C109	08T35374W01	CP., 0.1µF
C110	08T35374W01	CP., 0.1µF
C111	08S65128F53	CP., 560pF
C112	08S65128F35	CP., 100pF
C113	08T15399W04	CP., 0.027µF
E113	23S61523F34	ELY., 100µF / 10V
C114	08S65128F65	CP., 4700pF
C115	08S65128F61	CP., 2200pF
C117	08S65128F68	CP., 8200pF
C118	08T15399W04	CP., 0.027µF
C119	08T35374W01	CP., 0.1µF
C120	08S65128F69	CP., 0.01µF
C121	08T35374W01	CP., 0.1µF
C122	08S65128F49	CP., 390pF
C123	08S65128F27	CP., 47pF
C124	08T35374W01	CP., 0.1µF
C128	08T35374W01	CP., 0.1µF
E128	23T74437F30	TAN., 4.7µF / 16V
C130	08T35374W01	CP., 0.1µF
E130	23T55402W09	ELY., 330µF / 6.3V
E131	23S61523F30	ELY., 2.2µF / 50V
C132	08T35374W01	CP., 0.1µF
C133	08T35374W01	CP., 0.1µF
C190	08S65128F19	CP., 22pF
C191	08T15399W03	CP., 0.047µF
C201	08S82122F41	CP., 150pF
E201	23T55402W15	ELY., 10µF / 16V
C202	08S82122F41	CP., 150pF
E202	23T55402W15	ELY., 10µF / 16V
E203	23T55402W05	ELY., 22µF / 6.3V
E204	23T55402W05	ELY., 22µF / 6.3V
C205	08S82122F47	CP., 270pF
E205	23T55402W13	ELY., 100µF / 10V
C206	08S82122F47	CP., 270pF
C207	08S82122F59	CP., 820pF
C208	08S82122F59	CP., 820pF
C231	08S82122F15	CP., 12pF
C232	08S82122F15	CP., 12pF
C233	08S82122F65	CP., 1500pF
C234	08S82122F65	CP., 1500pF
C401	08T35374W01	CP., 0.1µF
C402	08S65128F62	CP., 2700pF

Symbol No.	Part No.	Description
C403	08T35374W01	CP., 0.1µF
C501	08T15399W03	CP., 0.047µF
C502	08T35374W01	CP., 0.1µF
C503	08T55487W02	CP., 0.22µF
C504	08T35374W01	CP., 0.1µF
E504	23S61523F29	ELY., 1µF / 50V
C505	08S82122F19	CP., 18pF
C506	08T35374W01	CP., 0.1µF
C508	08T35374W01	CP., 0.1µF
C509	08S82122F19	CP., 18pF
C510	08T35374W01	CP., 0.1µF
E510	23S61523F06	ELY., 33µF / 6.3V
C511	08T35374W01	CP., 0.1µF
E511	23S61523F34	ELY., 100µF / 10V
C512	08S65128F35	CP., 100pF
C513	08S65128F35	CP., 100pF
C515	08T55487W02	CP., 0.22µF
C516	08S65128F63	CP., 3300pF
C520	08T55401W01	CP., 1000pF
C801	08T15399W02	CP., 0.033µF
E801	23T75427W01	ELY., 470µF / 16V
E802	23S16086W01	ELY., 220µF / 10V
E803	23S61523F14	ELY., 33µF / 16V
E804	23T55402W18	ELY., 47µF / 16V
C805	08T35374W01	CP., 0.1µF
E808	23S16086W01	ELY., 220µF / 10V

Resistors (All resistors are chip 1/10W±5% unless otherwise noted.)

R101	06S64995F75	8.2K ohm
R102	06S64996F10	220K ohm
R103	06S64996F02	100K ohm
R104	06S64995F85	22K ohm
R105	06S64995F91	39K ohm
R106	06S64996F06	150K ohm
R107	06S64995F77	10K ohm
R109	06S64996F04	120K ohm
R110	06S64996F26	1M ohm
R111	06S64996F02	100K ohm
R112	06S64995F45	470 ohm
R113	06S64995F86	24K ohm
R114	06S64995F57	1.5K ohm
R115	06S64995F93	47K ohm
R116	06S64995F29	100 ohm
R117	06S64995F29	100 ohm
R118	06S64995F53	1K ohm
R124	06S64996F10	220K ohm
R126	06S64995F81	15K ohm
R127	06S64995F77	10K ohm
R130	06S64995F77	10K ohm
R131	06S64995F81	15K ohm
R136	06S64995F61	2.2K ohm

Symbol No.	Part No.	Description
R141	06S70072F15	27 ohm 1/4W
R194	06S64995F77	10K ohm
R196	06S64995F45	470 ohm
R197	06S64995F27	82 ohm
R201	06S64995F72	6.2K ohm
R202	06S64995F72	6.2K ohm
R203	06S64995F82	16K ohm
R204	06S64995F82	16K ohm
R207	06S64995F61	2.2K ohm
R208	06S64995F61	2.2K ohm
R209	06S64995F81	15K ohm
R210	06S64995F81	15K ohm
R213	06S64995F50	750 ohm
R214	06S64995F50	750 ohm
R225	06S64995F86	24K ohm
R226	06S64995F86	24K ohm
R227	06S64995F21	47 ohm
R228	06S64995F21	47 ohm
R229	06S64995F78	11K ohm
R230	06S64995F78	11K ohm
R235	06S64995F50	750 ohm
R241	06S64996F11	240K ohm
R242	06S64996F11	240K ohm
R401	06S70072F46	510 ohm 1/4W
R402	06S70072F49	680 ohm 1/4W
R502	06S64995F57	1.5K ohm
R503	06S64995F57	1.5K ohm
R506	06S64995F93	47K ohm
R507	06S64995F93	47K ohm
R508	06S64995F93	47K ohm
R509	06S64995F93	47K ohm
R513	06S64995F92	43K ohm
R514	06S64995F77	10K ohm
R517	06S64995F85	22K ohm
R518	06S64995F50	750 ohm
R520	06S64995F75	8.2K ohm
R521	06S64996F14	330K ohm
R522	06S64996F26	1M ohm
R523	06S64996F18	470K ohm
R535	06S64995F93	47K ohm
R536	06S64995F93	47K ohm
R550	06S64995F85	22K ohm
R560	06S64995F69	4.7K ohm
R561	06S64995F69	4.7K ohm
R562	06S64995F69	4.7K ohm
R563	06S64995F69	4.7K ohm
R564	06S64995F69	4.7K ohm
R565	06S64995F69	4.7K ohm
R566	06S70072F34	160 ohm 1/4W
R567	06S70072F34	160 ohm 1/4W
R568	06S70072F34	160 ohm 1/4W
R569	06S70072F34	160 ohm 1/4W

Symbol No.	Part No.	Description
R570	06S64995F61	2.2K ohm
R571	06S64995F61	2.2K ohm
R573	06S64995F87	27K ohm
R574	06S64995F81	15K ohm
R575	06S64995F77	10K ohm
R576	06S64995F93	47K ohm
R577	06S64995F93	47K ohm
R578	06S64995F93	47K ohm
R579	06S64995F77	10K ohm
R580	06S64995F77	10K ohm
R600	06S70072F05	10 ohm 1/4W
R603	06S64995F93	47K ohm
R604	06S64995F93	47K ohm
R701	06S64995F29	100 ohm
R702	06S64995F93	47K ohm
R801	06S70072F34	160 ohm 1/4W
R802	06S70072F34	160 ohm 1/4W
R812	06S70072F27	82 ohm 1/4W

Connector P. C. Board

Capacitors

C203	08S82122F59	CP.,	820pF
E520	23S61523F25	ELY.,	0.1μF / 50V
C840	08T55487W02	CP.,	0.22μF

Resistors (All resistors are chip 1/4W±5% unless otherwise noted.)

R233	06S70072F05	10 ohm
R234	06S70072F05	10 ohm
R540	06S70072F45	470 ohm
R840	06S64995F75	8.2K ohm 1/10W

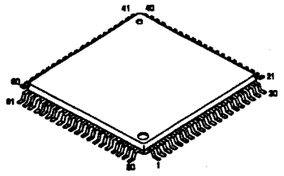
Miscellaneous

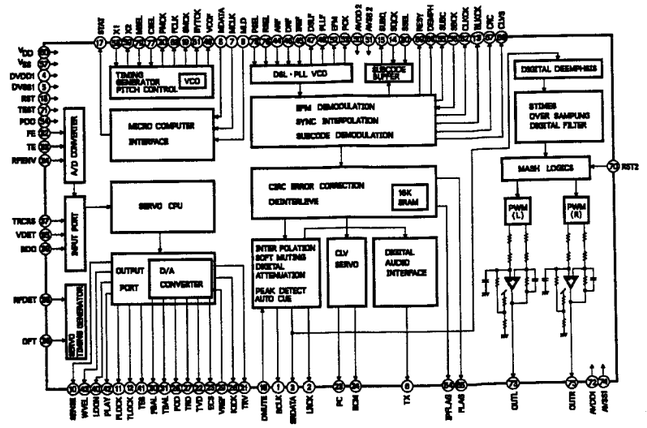
ET801	01T55619W06	Ai-NET Connector
HD101	88T55261W01	Pick-Up Unit
IC701	51T75111W01	IC, TOTX193
M101	59T65085W01	Motor, Load 7V-370mV (LOADING)
M102	59T65085W01	Motor, Load 7V-370mV (ELEVATOR)
M103	59T65085W01	Motor, Load 7V-370mV (SLED)
M104	59T91005F03	Motor, Spindle 2V-215mA (SPINDLE)
S101	40T35543W02	Switch, Detector (UNLOAD)
S102	40T35543W02	Switch, Detector (LOADING)
S104	40T15222W01	Switch, Detector (MAGAZINE IN)
S105	40T71025F01	Switch, Detector (LIMIT)
VR101	18T55678W01	Volume, Slide RS32111 10K ohm

Semi - Conductor Lead Identifications

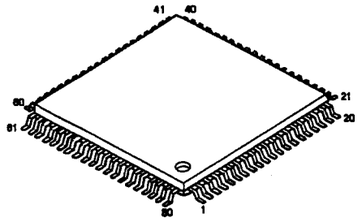
Note : For the parts not mentioned, refer to the Schematic Diagram.
※ 記載されていない部品については、回路図を参照願います。

MN66271 : IC101



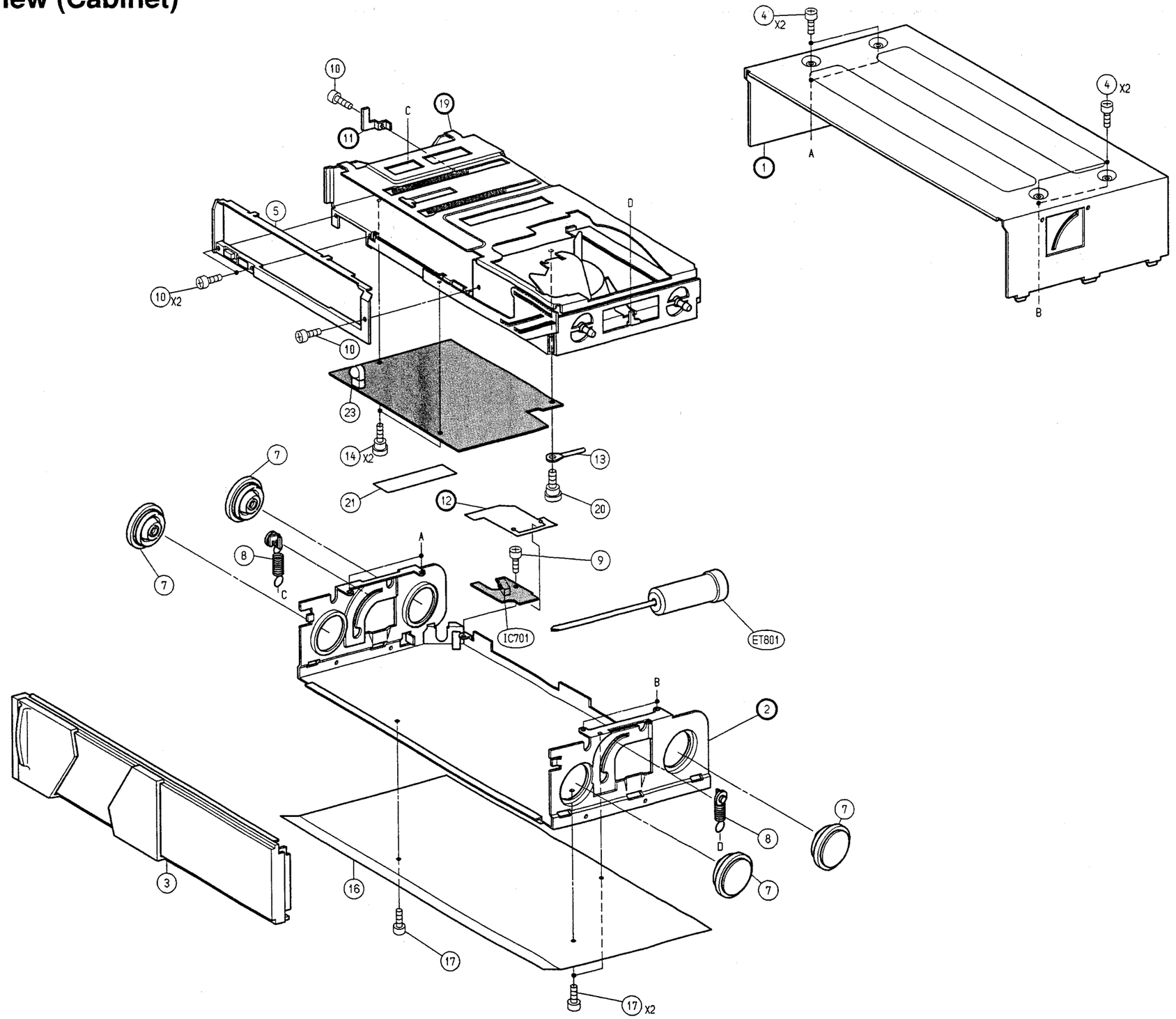


75099W08 : IC501 (○)
65478W01 : IC501 (△□)



PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	MAGSW	I	21	A2	O	41	DMUTE	O	61	GND	—
2	LMTSW	I	22	ELVM+	O	42	AMUTE	O	62	BATT	I
3	NC	—	23	ELVM−	O	43	VCONT	O	63	ACC	I
4	GND	—	24	LODM+	O	44	RST2	O	64	BLKCK	I
5	NC	—	25	LODM−	O	45	LEDCNT	O	65	J-IRQ	I
6	PULL UP	—	26	NC	—	46	NC	—	66	EJECT	I
7	+5V	—	27	NC	—	47	NC	—	67	NC	—
8	NC	—	28	MLD	O	48	NC	—	68	V_{DD}	—
9	BUS-DET	I	29	MDATA	O	49	NC	—	69	X2	—
10	NC	—	30	MCLK	O	50	NC	—	70	X1	—
11	SUB-Q	I	31	STAT	I	51	NC	—	71	GND	—
12	J-RST	O	32	TLOCK	I	52	NC	—	72	NC	—
13	SQCK	O	33	GND	—	53	NC	—	73	GND	—
14	J-RS	O	34	FLOCK	I	54	NC	—	74	AV_{DD}	—
15	J-R/W	O	35	SENSE	I	55	NC	—	75	+5V	—
16	J-SIN	I	36	NC	—	56	NC	—	76	LPS	I
17	J-SOUT	O	37	NC	—	57	NC	—	77	TEMP	I
18	J-SCLK	O	38	NC	—	58	NC	—	78	DOSW	I
19	A0	O	39	NC	—	59	NC	—	79	ULDSW	I
20	A1	O	40	XRST	O	60	RESET	I	80	LODSW	I

Exploded View (Cabinet)



Cabinet Assembly Parts List

Note : No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
3	5-B	13C60207W03	Assy., Front Escutcheon
4		03A61184W02	Screw, Bind (M2.6×4)
5	2-C	64B60211W02	Plate, Inner
7		75C58094W01	Damper, DT
8		07A61053W01	Assy., Bracket Spring
9	3-D	03S44205G62	Screw, Bind (M2.6×5)
10		03S94385F48	Screw, Pan (M2×4)
13	3-D	29C41045P02	Lug, Wrap Around
14	3-C	03A38056W01	Screw, Special (M2.6×6)
16	5-C	54B71593W01	Card, Caution
17		03A68008W01	Screw, Transport (M3×12.2)
20	3-D	03A38056W02	Screw, Special (M2.6×6)
21	3-C	30T65173W01	Wire, Flat
23	3-C	43A70497W01	Spacer, LED

Symbol No.	Index	Part No.	Description

Packing Assembly Parts List

Symbol No.		Part No.	Description
○	101-1	07B71141W01	Bracket, Side
△	101-1	07B60217W02	Bracket, Side
□	101-1	07B60217W02	Bracket, Side
○	101-2	07B60218W01	Bracket, Mounting Base
△	101-2	07B60218W02	Bracket, Mounting Base
□	101-2	07B60218W02	Bracket, Mounting Base
	101-3	03B90962F03	Bolt, Hex. Flange (M6×50)
	101-4	03B40155F10	Bolt, Hex. (M6×25)
	101-5	03S63857F05	Screw, Tapping (M5×15)
	101-6	03D40121T11	Screw, W/Doublu Washer (M4×8)
	101-7	02B47353F06	Nut, Hex. (M6)
	102	01T55619W34	Ai-NET Cable
	103-1	68P61329W26	Owner's Manual
△	103-2	68P61329W27	Owner's Manual (I / G / S)
□	103-2	68P61329W27	Owner's Manual (I / G / S)

Symbol No.		Part No.	Description
△	103-3	68P61329W80	Owner's Manual (J)
□	103-3	68P61329W80	Owner's Manual (J)
○	103-4	15A71395W01	Cover, Plate (L / R)
△	103-5	15A70484W01	Cover, Plate (L)
□	103-5	15A70484W01	Cover, Plate (L)
△	103-6	15A70484W02	Cover, Plate (R)
□	103-6	15A70484W02	Cover, Plate (R)
	104	01D60231W01	Assy., Magazine
	105	54A71620W01	Card, Arrow

Notes : ○ : For North American Model Only,
□ : For Japanese Model Only,
△ : For General Foreign Model Only,
Others : Common.

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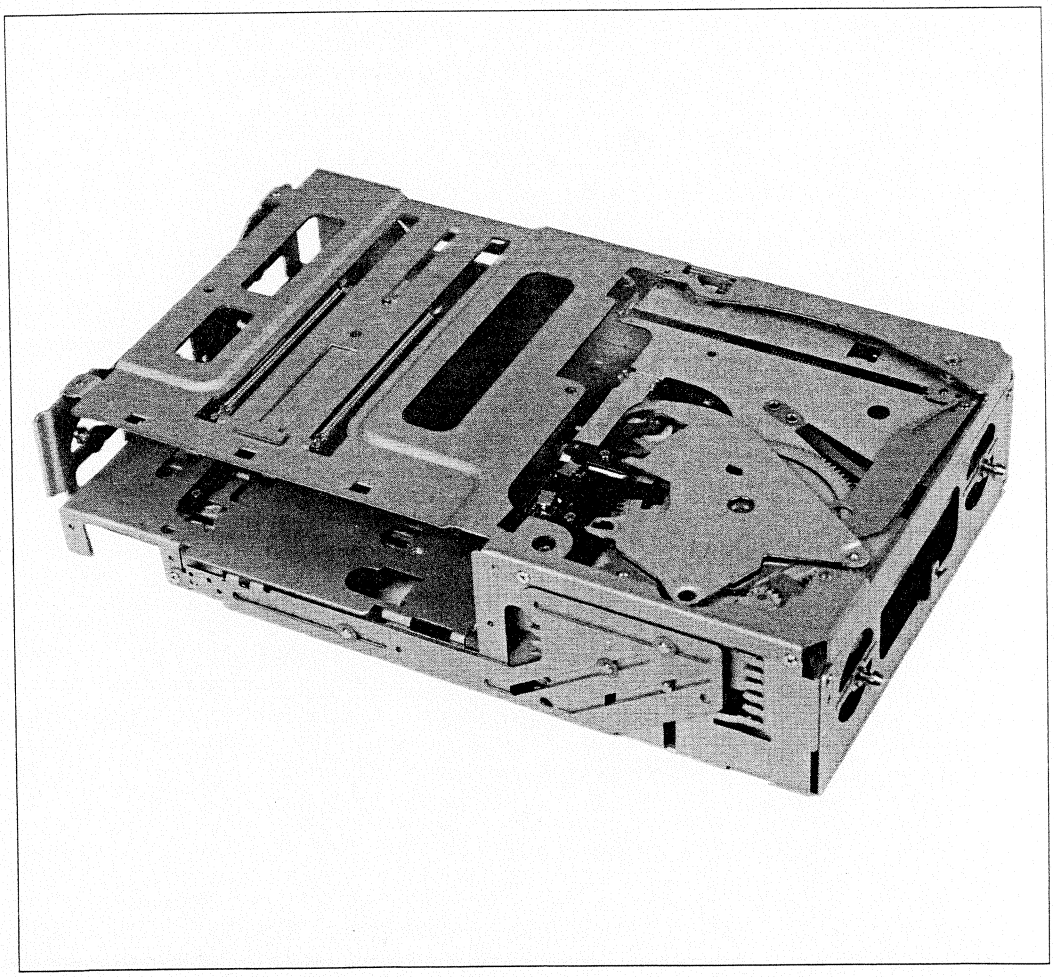
SERVICE MANUAL

V01393

CD Changer Mechanism

CD Shuttle



DT SERIES

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Disassembly Instructions

1. Removal of Riv. Chassis Top Assembly

(1) Remove the spring (1) as shown in Figure 1.
(2) Remove the screw (2) as shown in Figure 1.

1. リベッティング シャーシ トップ組立の外し方

(1) 1本のバネ (1) を外します。(1図参照)
(2) 1本のネジ (2) を外します。(1図参照)

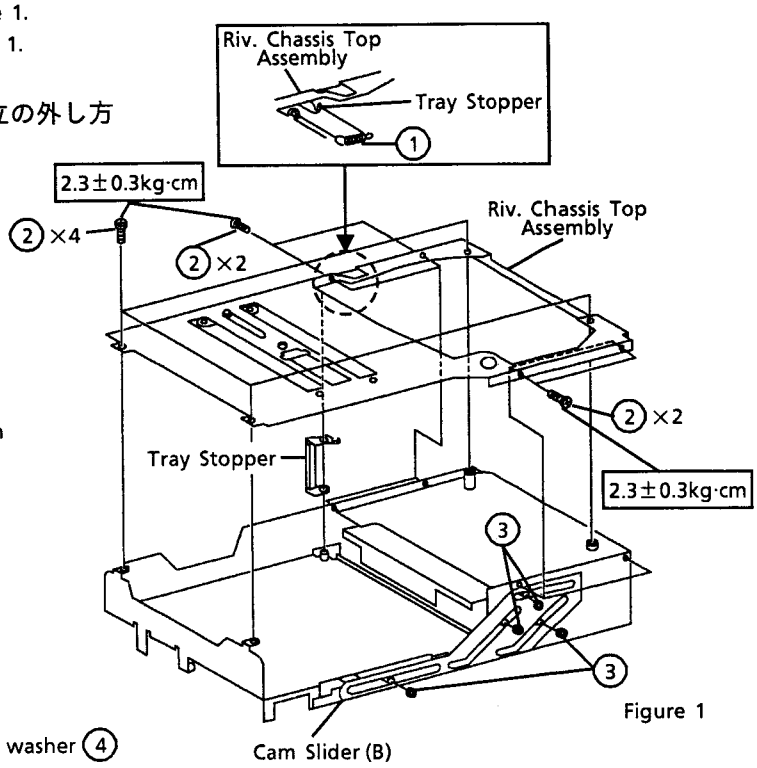


Figure 1

2. Removal of Cam Slider (B)

(1) Remove the four washers (3) as shown in Fugere 1.

2. カム スライダー(B) の外し方

(1) 4個のワッシャー (3) を外します。

3. Removal of Cam Slider (A)

(1) Remove the Rack Gear, by removing the washer (4) as shown in Figure 2.
(2) Remove the Elevator Rack, by removing two screw (5) as shown in Figure 2.
(3) Remove the four washer (6) as shown in Figure 2.

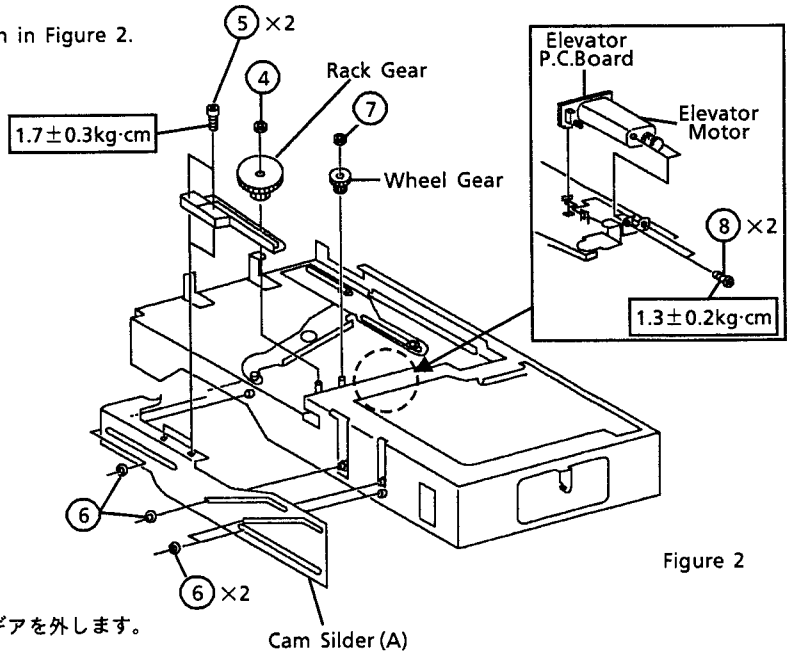


Figure 2

3. カム スライダー(A) の外し方

(1) 1個のワッシャー (4) を外して, ラックギアを外します。(2図参照)
(2) 2本のネジ (5) を外して, エレベーターラックを外します。(2図参照)
(3) 4個のワッシャー (6) を外します。

4. Removal of Elevator Motor

(1) After removal of Elevator Rack, remove the Wheel Gear by removing the washer (7) as shown in Figure 2.
(2) Remove the two screws (8) as shown in Figure 3.
(3) Elevator Motor with the Elevator P.C.Board can be removed completely.

4. エレベーターモーター の外し方

(1) エレベーターラックを外した後, 1個のワッシャー (7) を外して, ホイールギアを外します。(2図参照)
(2) 2本のネジ (8) を外します。(3図参照)
(3) 以上でエレベーターモーターはエレベーター基板が付いた状態で外れます。

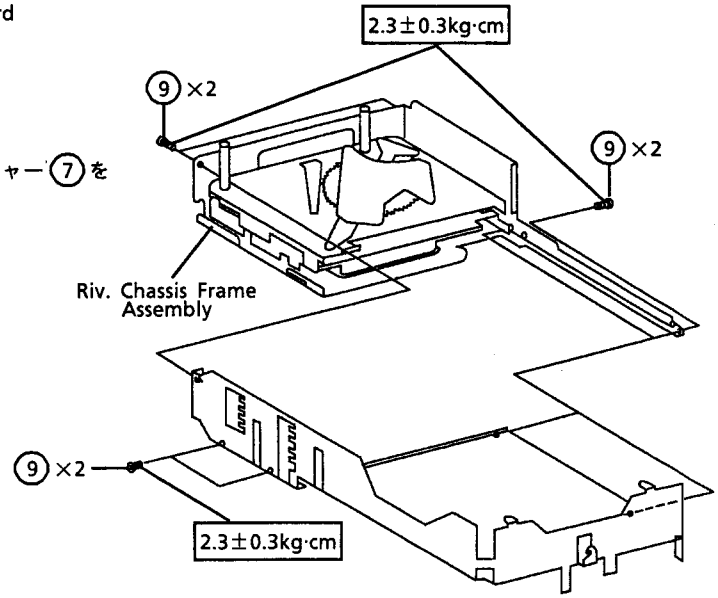


Figure 3

5. Removal of Chassis Frame Assembly

(1) Remove the six screws (9) as shown in Figure 3.

5. シャーシ フレーム組立 の外し方

(1) 6本のネジ (9) を外します。(3図参照)

6. Removal of Chassis Tray Assembly

(1) Remove the two screws (10) as shown in Figure 4.

6. シャーシ トレイ組立 の外し方

(1) 2本のネジ (10) を外します。(4図参照)

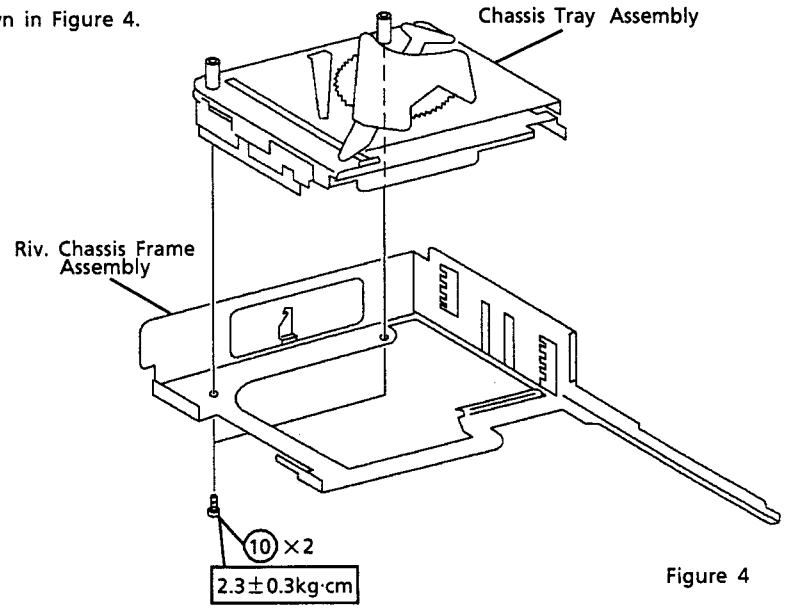


Figure 4

7. Removal of Drive Unit Assembly

(1) Remove the Three solders (11) as shown in Figure 5.
(2) Remove the Bracket Motor Assembly, by removing the screw (12) as shown in Figure 5.
(3) remove the Rod Spring as shown in Figure 5.

7. ドライブユニット組立の外し方

(1) 3箇所の半田 (11) を外します。(5図参照)
(2) 1本のネジ (12) を外して，ブラケットモーター組立を外します。(5図参照)
(3) ロッドバネを外します。(5図参照)

8. Removal of Switch P.C.Board

(1) Remove the three solders (13) as shown in Figure 6.
(2) Remove the Switch Arm and Tray Side Guide, by removing the two screws (14) as shown in Figure 6.

8. スイッチ基板の外し方

(1) 3箇所の半田 (13) を外します。(6図参照)
(2) 2本のネジ (14) を外して，アーム スイッチとトレイサイドガイドを外します。(6図参照)

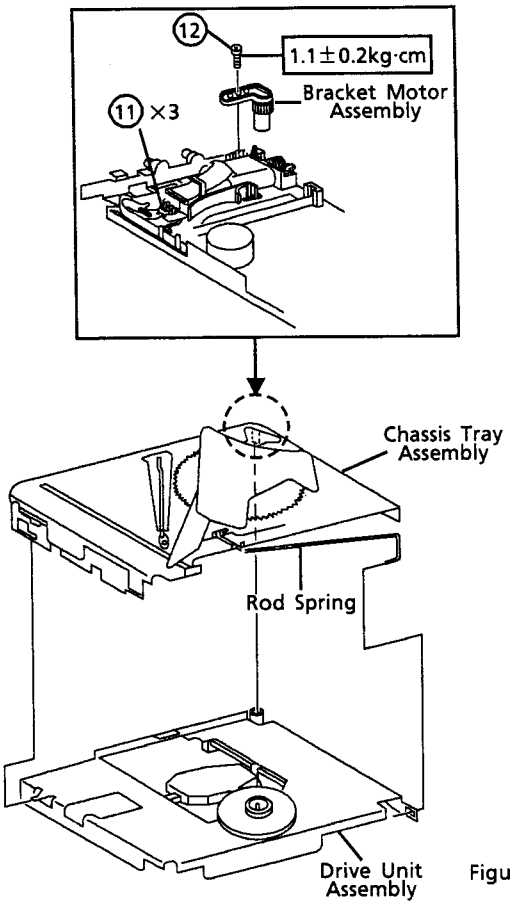


Figure 5

9. Removal of Sled Motor

(1) Remove the two solders (15) as shown in Figure 7.
(2) Remove the Middle Gear, by removing the washer (16) as shown in Figure 7.
(3) Remove the two screws (17) as shown in Figure 7.

9. スレッドモーターの外し方

(1) 2箇所の半田 (15) を外します。(7図参照)
(2) 1個のワッシャー (16) を外して，ミドルギアを外します。(7図参照)
(3) 2本のネジ (17) を外します。(7図参照)

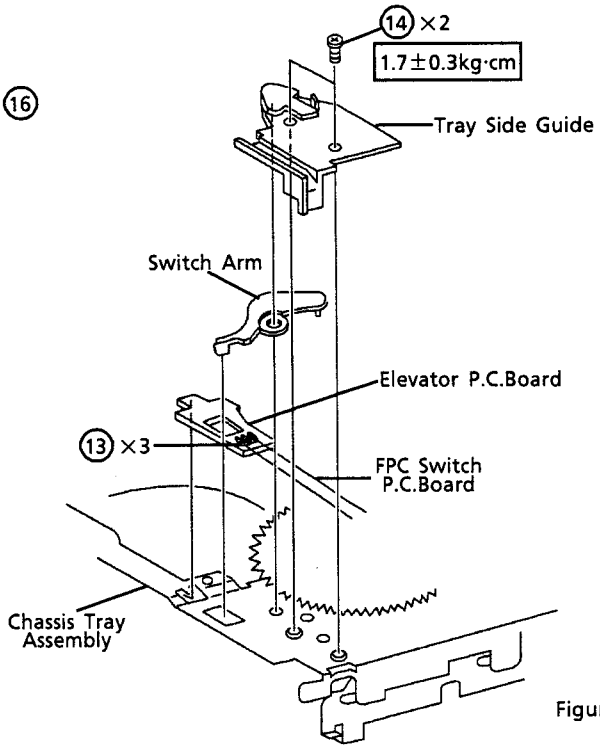


Figure 6

10. Removal of Loading Motor

(1) Remove the two solders (18) as shown in Figure 7.
(2) Remove the two screws (19) as shown in Figure 7.

10. ローディングモーターの外し方

(1) 2箇所の半田 (18) を外します。(7図参照)
(2) 2本のネジ (19) を外します。(7図参照)

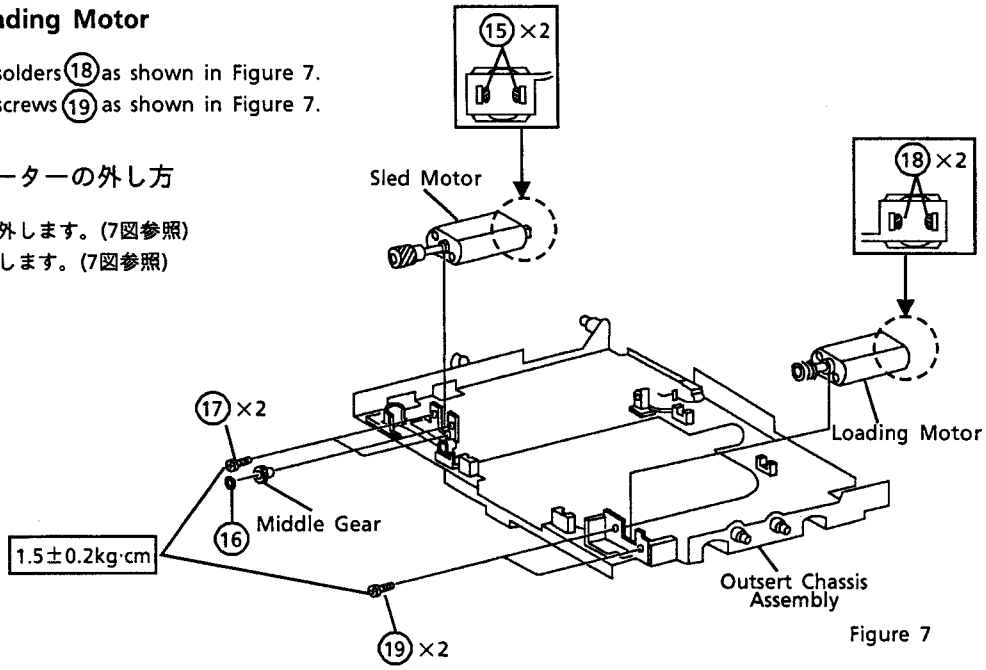


Figure 7

11. Removal of Pick Up Unit

(1) Remove the four solders (20) as shown in Figure 9.
(2) Remove the Shaft Stopper (A) / (B), by removing the two screws (21) as shown in Figure 8.
(3) Remove the two Shafts as shown in Figure 8.

11. プックアップユニットの外し方

(1) 4箇所の半田 (20) を外します。(9図参照)
(2) 2本のネジ (21) を外して, シャフトストッパー(A) / (B)を外します。(8図参照)
(3) 2本のシャフトを引き抜きます。(8図参照)

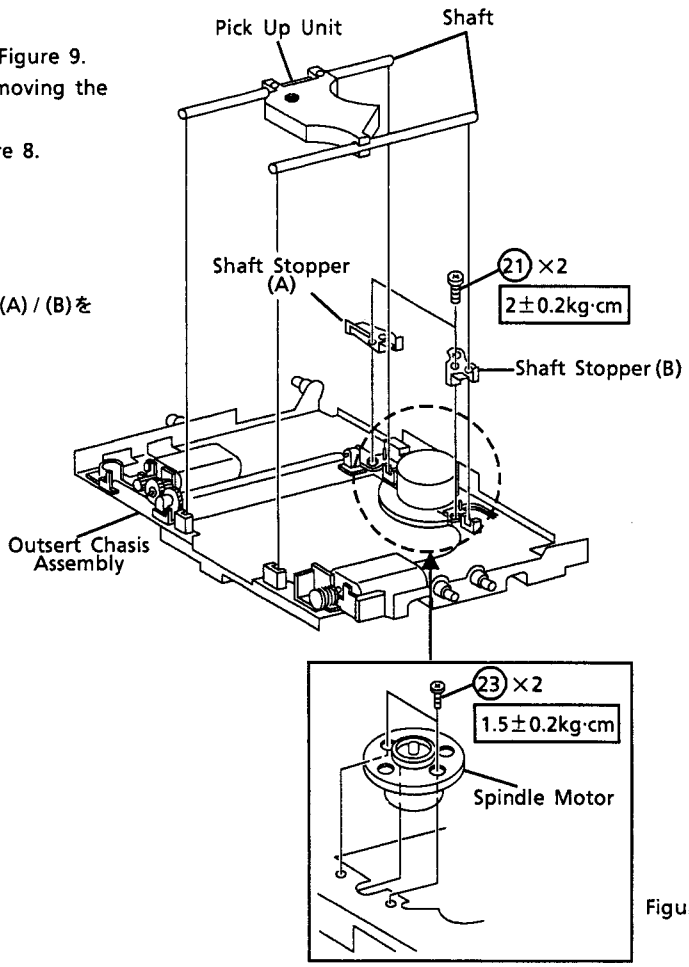


Figure 8

12. Removal of Spindle Motor

(1) Disconnect the RED and BLK wires, by removing the two solders (22) as shown in Figure 9.
(2) Remove two screws (23) as shown in Figure 8.

12. スピンドルモーターの外し方

(1) 2箇所の半田 (22) を外して, 赤 / 黒のワイヤーを外します。(9図参照)
(2) 2本のネジ (23) を外します。(8図参照)

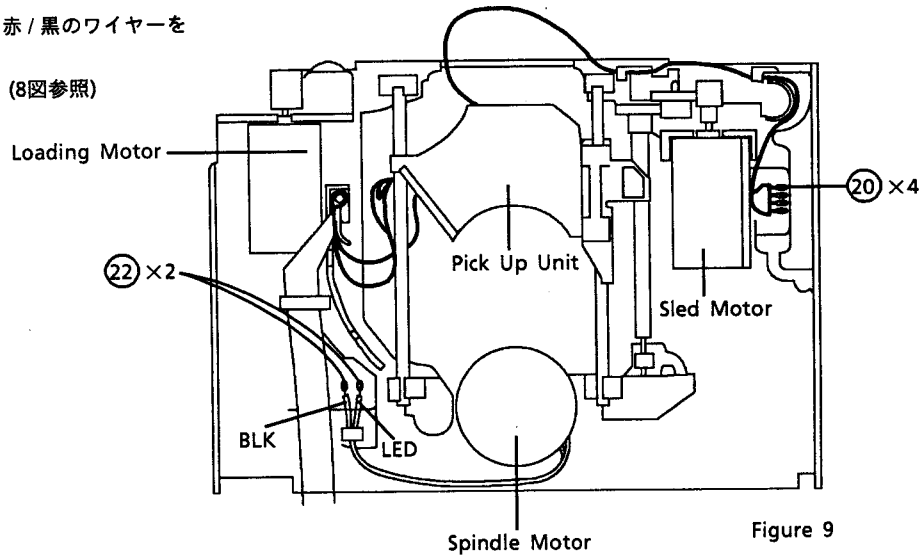


Figure 9

Mechanism Function Description

- Magazine Insertion

Step	Description	Illustration
1	When a magazine is inserted, the eject lever is pushed in.	Figure 10
2	Further insertion of the magazine causes the magazine lock arm to move.	
3	The magazine lock arm causes the magazine to lock. At the same time the thrust magazine switch is pushed and the magazine switch is turned off. (Confirmation of the magazine lock.)	

- マガジン挿入

順序	動 作 説 明	イラスト
1	マガジンを挿入するとイジェクト·レバーが押される。	10 図
2	更に挿入するとマガジン·ロック·アームが動く。	
3	マガジン·ロック·アームによりマガジンがロックされ、同時にスライド·マガジン·スイッチが押されマガジン·スイッチがOFFする。(マガジンがロックされたことの確認)	

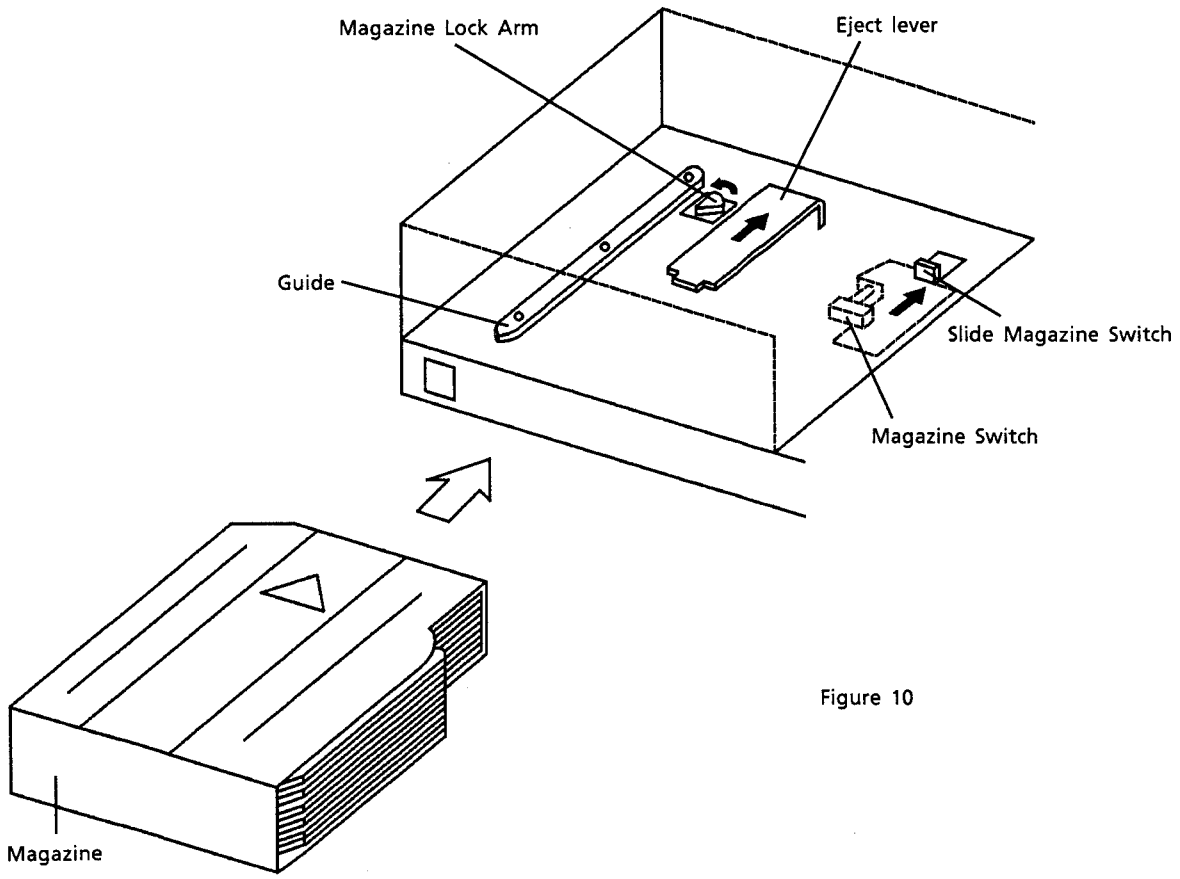


Figure 10

● DISC Loading

Step	Description	Illustration
1	The elevator motor rotates.	Figure 11
2	The rotation is transmitted to gears (A), (B), (C), and (D).	
3	The rotation of the gear (D) moves the slider cam (A) in Y direction and the slider cam (B) in X direction. Then, the chassis tray and the drive unit move in Q direction along to edges of the cams.	
4	Motion of the bracket sensor in X, Y directions moves the position sensor volume, thereby controlling movement distances of the chassis tray and the drive unit.	
5	The chassis is stopped at the first disc position in the magazine. (This operation is the same for 2nd through 6th discs except the movement distance of the chassis is different.)	
6	The loading motor rotates. (The loading motor can rotate in forward and reverse directions.)	
7	The rotation is transmitted to gears (E), (F), (G) and (H).	
8	The rotation of the gear (H) moves the arm push-pull in Y direction through the lever cam and takes out the tray from the magazine.	
9	In the same way as in the step (8), the rotation of gear (H) moves the slider lock claw at side of the chassis tray through the lover slider lock and engages it with the slit provided on the chassis frame, thus locking the chassis tray.	
10	In the same way as in the step (9), the rotation of gear (H) turns on the switch A through the arm switch. (Confirmation of the tray pulled into the chassis tray.)	
11	Steps 1 - 4 (step 3 for only the drive unit) are repeated again to bring the drive unit in the disc play position and then the disc is clamped by pressing the disc to the clamper.	

● DISC ローディング

順序	動 作 説 明	イラスト
1	エレベーター･モーターが回転する。	11図
2	ギア (A), (B), (C), (D)と動力が伝達する。	
3	ギア (D) の動力によりスライダー･カム (A) がY方向、スライダー･カム (B) がX方向に動き、カムのプロフィールに沿ってシャーシ･トレイ及びドライブ･ユニットがQ方向に動く。	
4	ブラケット･センサーがX, Y方向に動くことによって、ポジションセンサー･ボリュームを動かし、シャーシ･トレイ及びドライブ･ユニットの移動距離を制御する。	
5	マガジンの1枚目のトレイ位置にシャーシ･トレイを止める。(2~6枚目のトレイはシャーシ･トレイ停止位置が異なるだけで、動作は同様)	
6	ローディング･モーターが回転する。(正逆転可能)	
7	ギア (E), (F), (G), (H) と回転が伝達する。	

順序	動 作 説 明	イラスト
8	ギア (H) の回転動力によりレバー·カムを介し、アーム·プッシュプルをY方向に動かし、マガジンからトレイを引き出す。	11図
9	項目8と同時に、ギア (H) の回転動力により、レバー·スライダー·ロックを介し、シャーシ·トレイの側面にあるスライダー·ロックの爪が動きシャーシ·フレームのスリット穴と勘合され、シャーシ·トレイがロックされる。	
10	項目9と同時に、ギア (H) の回転動力により、アーム·スイッチを介し、スイッチ (A) がONする。(トレイがシャーシ·トレイに引き込まれたことの確認)	
11	再び項目1~4の動作(項目3はドライブ·ユニットのみ)を行い、DISCプレイ位置にドライブ·ユニットを動かすことによって、DISCをクランパーに押しつけてDISCをクランプする。	

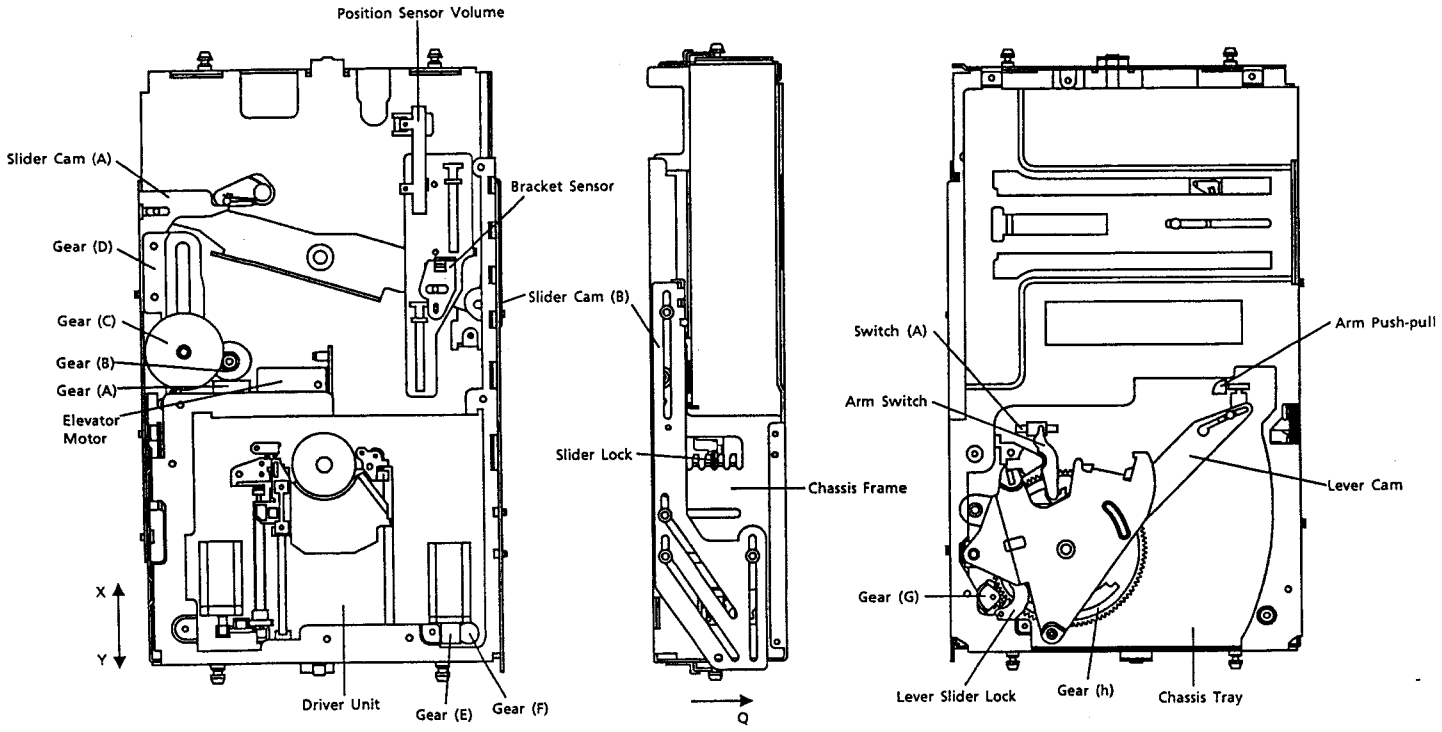


Figure 11

● Play

Step	Description	Illustration
1	The spindle motor rotates.	Figure 12
2	The rotation of the sled motor is transmitted through the gears to the feed screw and moves the pickup.	
3	The lead-in position of the disc is detected by the inner limit position switch and the reading of the disc data begins.	

● プレイ

順序	動 作 説 明	イラスト
1	スピンドル·モーターが回転する。	12図
2	スレッド·モーターの回転がギア (I), (J)を介して送りスクリューに伝えられ、ピック·アップを移動させる。	
3	内周リミットスイッチにより、DISCのリードイン位置を検知し、DISCの情報を読み始める。	

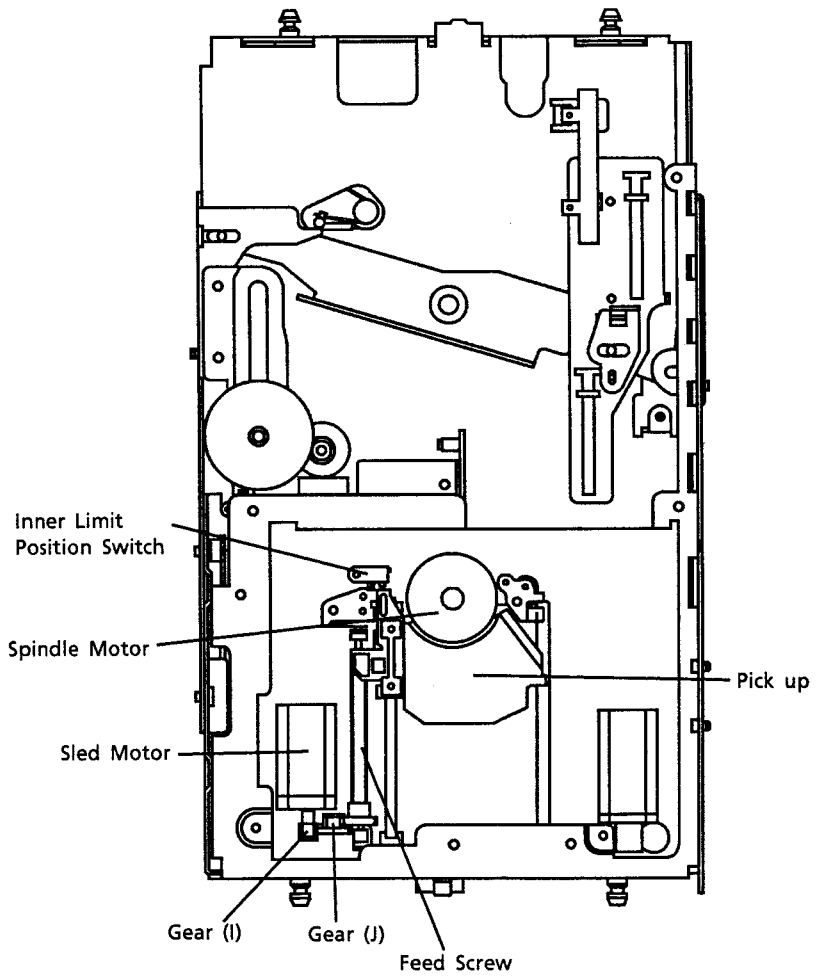


Figure 12

● Disc Unloading

Step	Description	Illustration
1	The elevator motor rotates.	Figure 13
2	The rotation of the motor is transmitted to gears (A), (B), (C), and (D).	
3	The rotation of the gear (D) moves the slider cam (A) in X direction and the slider cam (B) in Y direction, and the drive unit moves along to the edges of the cams, thereby releasing the disc clamp.	
4	The loading motor rotates.	
5	The rotation of the motor is transmitted to gears (E), (F), (G), and (H).	
6	The rotation of gear (H) is transmitted to the arm push-pull through the lever cam and this moves the arm push-pull in X direction, thereby housing the tray into the magazine.	
7	In the same way as in step (6), the rotation of the gear (H) moves the slider lock through the lever slider lock and releases the lock of the chassis tray.	
8	In the same way as in step (7), the rotation of the gear (H) turns on the switch (B) through the arm switch. (Confirmation of the tray housed in the magazine.)	

● DISC アンローディング

順序	動 作 説 明	イラスト
1	エレベーター･モーターが回転する。	13 図
2	ギア(A), (B), (C), (D)と動力が伝達する。	
3	ギア(D)の動力により、スライダー･カム(A)がX方向、スライダー･カム(B)がY方向に動き、カムのプロフィールに沿ってドライブ･ユニットがP方向に動きDISCクランプを解除する。	
4	ローディング･モーターが回転する。	
5	ギア(E), (F), (G), (H)と回転が伝達する。	
6	ギア(H)の回転動力によりレバー･カムを介し、アーム･プッシュ･プルをX方向に動かし、トレイをマガジンに収納する。	
7	項目6と同時に、ギア(H)の回転動力により、レバー･スライダー･ロックを介し、スライダー･ロックを動かし、シャーシ･トレイのロックを解除する。	
8	項目7と同時に、ギア(H)の回転動力により、アーム･スイッチを介し、スイッチ(B)がONする。(トレイが、マガジンに収納されたことの確認)	

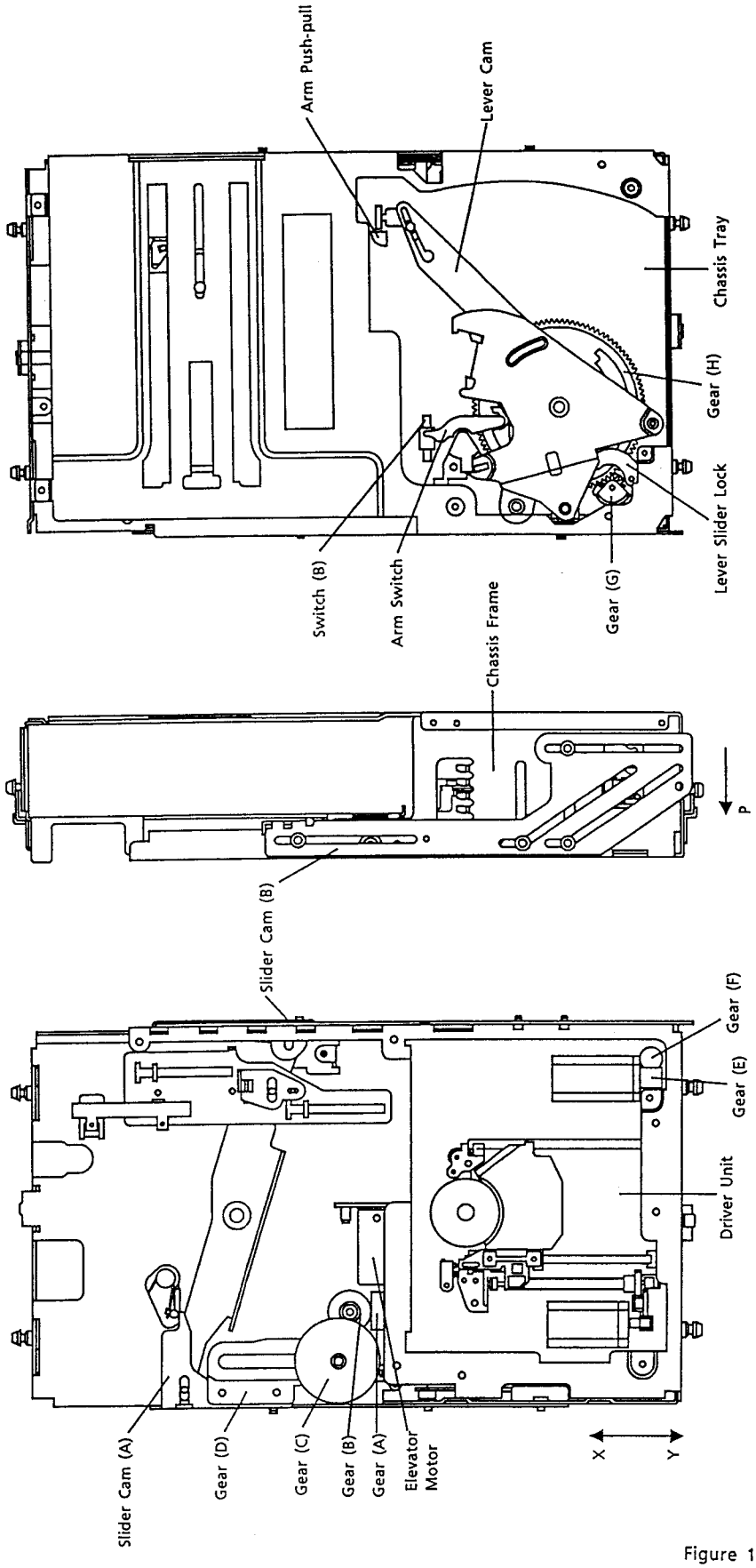

Arm Push-pull
Lever Cam
Chassis Tray
Gear (H)
Lever Slider Lock
Switch (B)
Arm Switch
Gear (G)
Chassis Frame
P
Slider Cam (B)
Gear (F)
Gear (E)
Driver Unit
Slider Cam (A)
Gear (D)
Gear (C)
Gear (B)
Gear (A)
Elevator Motor
X
Y

Figure 13

● Magazine Eject

Step	Description	Illustration
1	The elevator motor rotates.	Figure 14
2	The rotation is transmitted to gears (A), (B), (C), and (D).	
3	The rotation of the gear (D) moves the slider cam (A) in X direction, and pushes the magazine lock arm, thereby releasing the magazine lock.	
4	The force of the spring moves the eject lever in R direction and this ejects the magazine and turns on the magazine switch. (Confirmation of the magazine ejected.)	

● DISC イジェクト

順序	動 作 説 明	イラスト
1	エレベーター·モーターが回転する。	14図
2	ギア(A), (B), (C), (D)と動力が伝達する。	
3	ギア(D)の動力により、スライダー·カム(A)がX方向に動きマガジン·ロック·アームを押し、マガジン·ロックが解除される。	
4	イジェクト·レバーがバネの力によりR方向に動きマガジンが排出され、マガジン·スイッチがONする。(マガジンを排出したことの確認)	

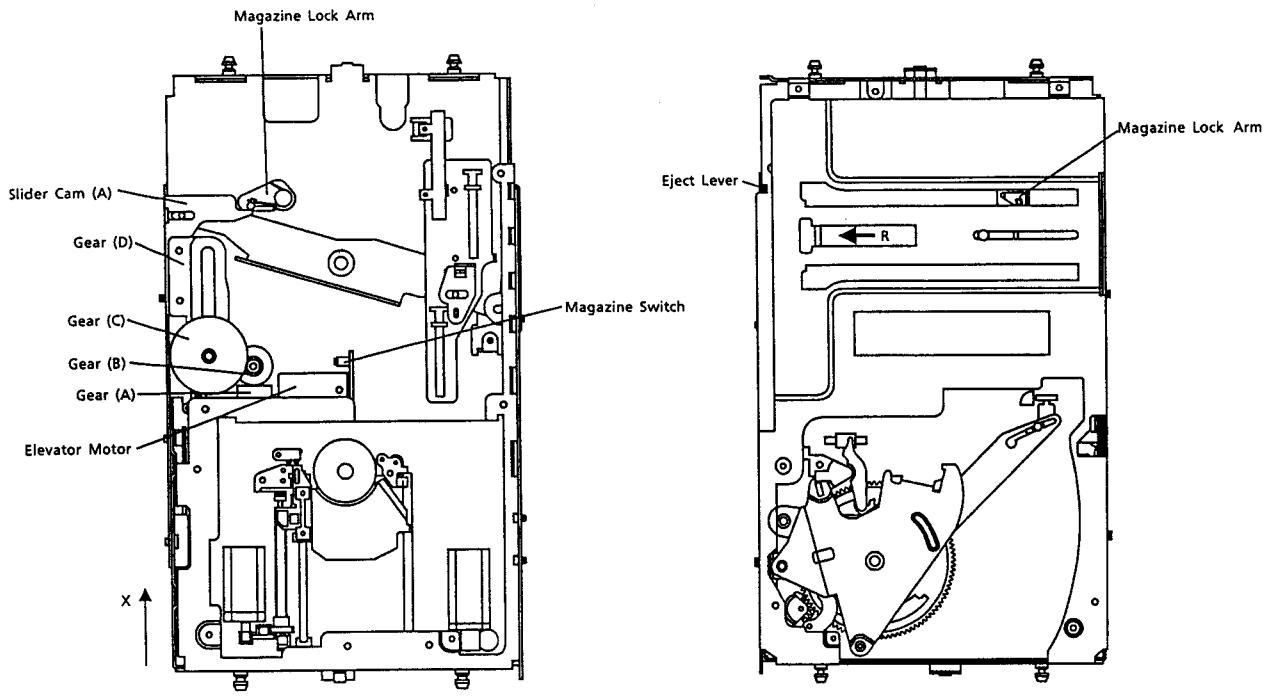


Figure 14

Timing Chart

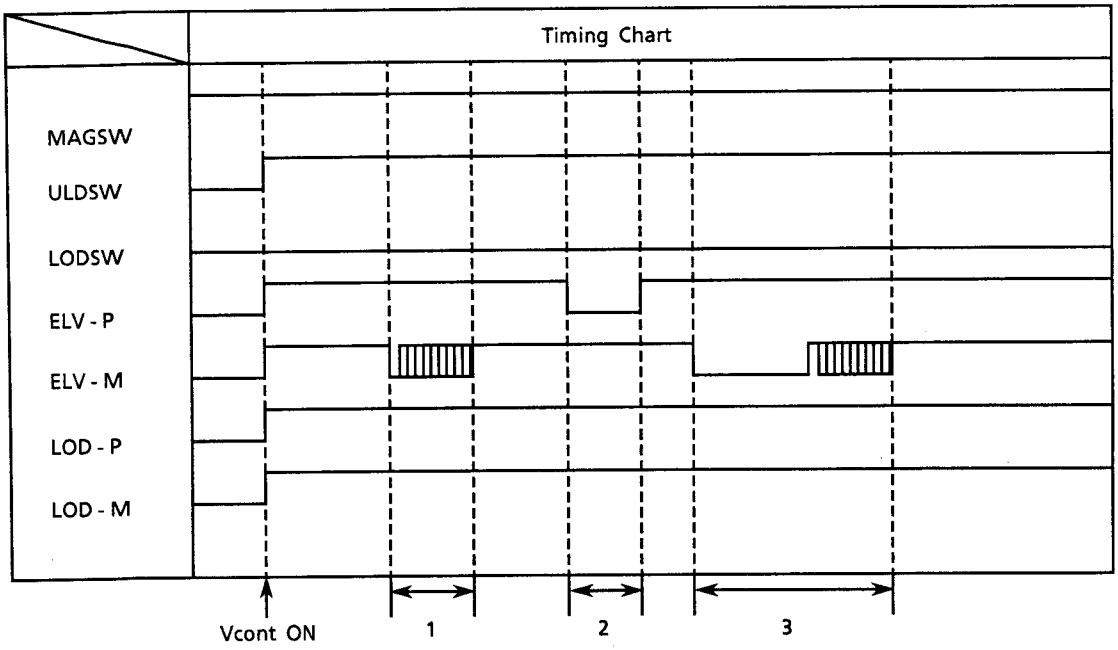
● Initialization (イニシャライズ動作)

Carried out when the unit is reset.

1. A blank eject operation is carried out when a magazine is not installed.
2. If the tray is pulled in (LODSW=L), one of two operations shown below is carried out.
   a. If the address is remembered in the EEPROM, nothing is carried out with the current conditions maintained.
   b. If the EEPROM does not exist, the address is identified by making a forced chucking.

リセットがかかった時に行う動作

1. マガジンなしの場合は、空イジェクト動作をする。
2. トレイを引き込んでいる場合 (LODSW=L) は、次の2つの場合がある。
   a. EEPROM で番地を覚えている場合は、そのまま何もしない。
   b. EEPROM がない場合は、強制チャッキングで番地を判断する。



Process contents

1	Forced chucking	When ULDSW is H and LODSW is L, the unit is in loading status, but chucking status is not judged with LPS only. So, forced chucking is carried out by moving the elevator upward with pulse signal for 3 seconds.
2	Releasing	Releases the chucking by moving the elevator downward. Microcomputer confirms a value of the linear position sensor and judges the disc position.
3	Chucking	As MAGSW is H, the mechanism chucks a disc, reads TOC, stops, and then waits commands from bus.
		* Condition to carry out the forced chucking : Unit without EEPROM is reset.

処理内容

1	強制 チャッキング	ULDSWがHでLODSWがLのときは、ローディングされている状態だが、チャッキングされているか否かは、LPSだけでは判断できない為、エレベーターを上方に3秒間パルス送りして強制的にチャッキングさせる。
2	リリース	エレベータを下方に移動させ、リリース(チャッキングを外す) μ-COMがリニアポジションセンサーの値を確認して、何枚目のポジションであるかを判断する。
3	チャッキング	MAGSWがHである為、ディスクをチャッキングしてTOCを読みSTOPしてからバスのコマンドを待つ。
		* 強制チャッキングを行う条件としては: EEPROMがなくてRESETがかかった場合。

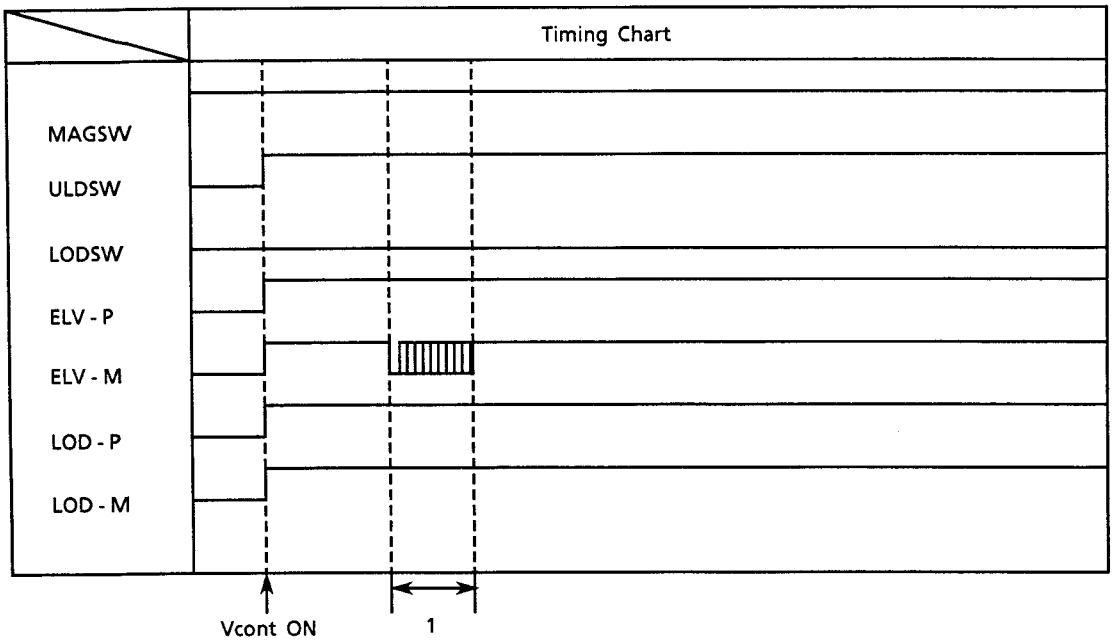
● Pressing operation (押し付け動作)

Pressing operation is carried out to perform precise chucking.

1. This operation is carried out when an operation mode is changed from Tape / Tuner to CD with the ACC / Power on after the reset.

正確にチャッキングするように押し付ける動作

1. リセット後にACC / POWERのONし、テープ / チューナーからCDになった時に行う。



Process contents

1	Pressing operation	As ULDSW is H and LODSW is L, a disc loaded is confirmed and the elevator is moved with pulse signal.
		* Pressing operation is an operation to remove a loosening.

処理内容

1	押し付け動作	ULDSWがH、LODSWがLであるためディスクがローディングさてれいることを確認して、エレベータをパルス送りにて移動させる。
		* 押し付け動作とは、緩みを取る為に行う動作をいう。

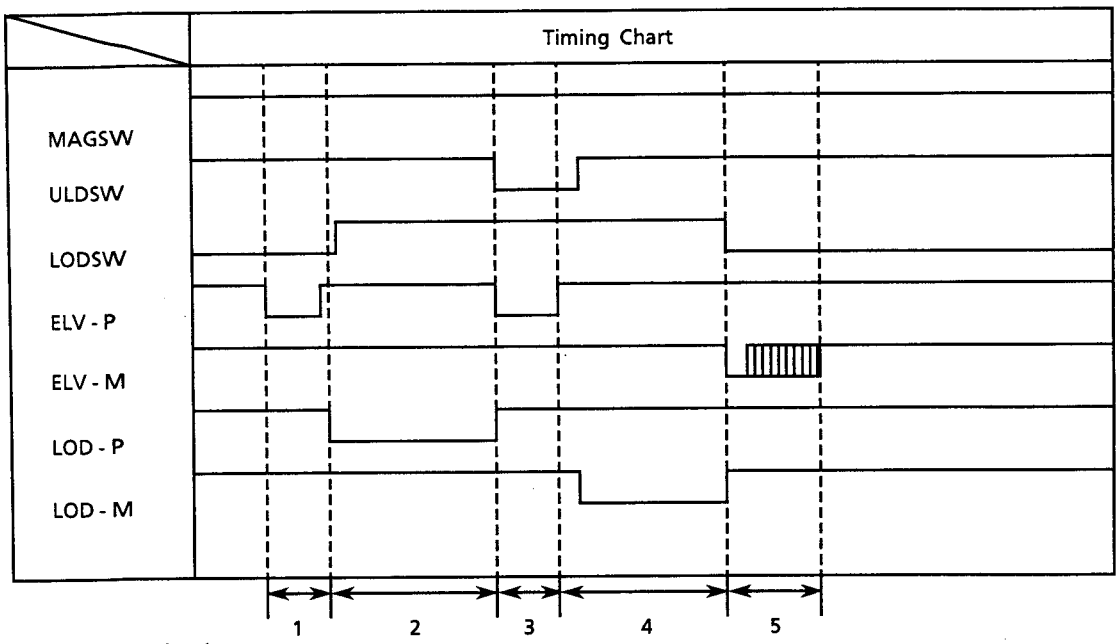
● Disc change operation (Example in downward operation) (ディスクチェンジ動作 (下向きの例))

Disc change operation from Mth disc to Nth disc.

1. Mth disc is released (MP→MT), unloading is carried out, and the elevator is moved (MT→NT), and then the loading and chucking operations are carried out (NT→MT).

M枚目からN枚目にDISCチェンジをする動作

1. M枚目をリリース (MP→MT) し、アンロードを行いエレベータを移動 (MT→NT) させローディング、チャッキング (NT→NP) する。



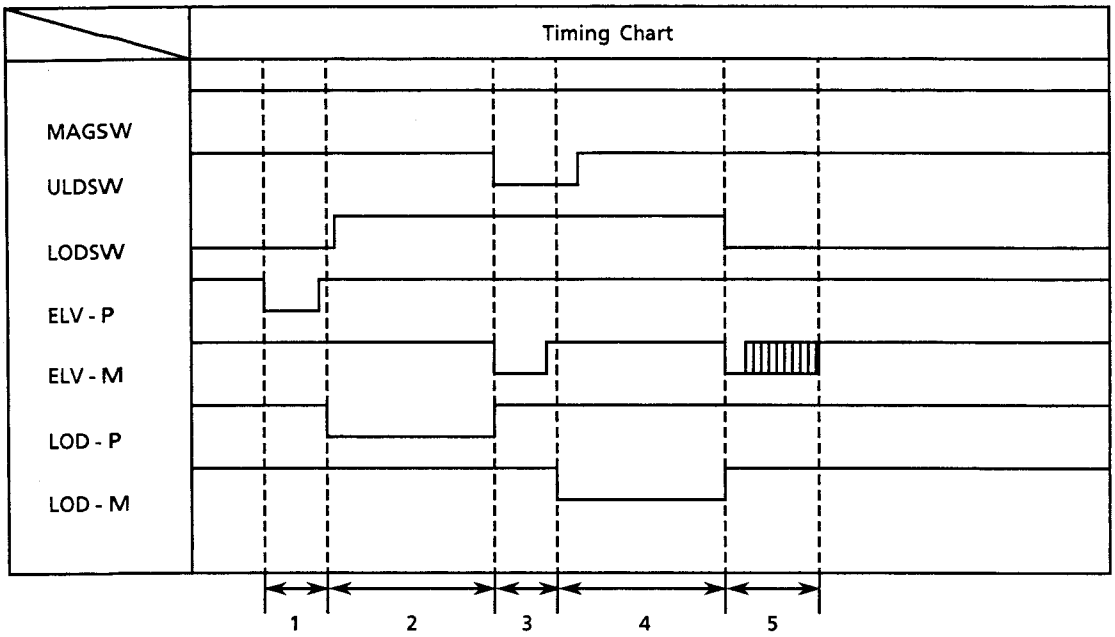
Process contents

1	Releasing	Moves the elevator downward and releases the chucking.
2	Unloading	Returns the disc to the tray. In this case, the operation completes at a falling edge of ULDSW [H→L (OFF→ON)].
3	Elevator downward	Moves the elevator downward and stops it when it reaches a predetermined pull-in position.
4	Loading	Pulls out the tray from the magazine. This operation completes when LODSW goes L (ON).
5	Chucking	Moves the elevator upward and chucks a disc. In this case, a final pulse is fed to make the chucking securely.

処理内容

1	リリース	エレベータを下方に移動させチャッキングを外す。
2	アンロード	ディスクをトレイに戻す。この時ULDSWの立ち下がり[H→L (OFF→ON)]をもって動作終了となる。
3	エレベータ下向き	エレベータを下方に移動させ、目的の引き込み位置まで移動した時点でSTOPする。
4	ローディング	マガジンよりトレイを引き出す。LODSWがL (ON) になった時点で動作終了となる。
5	チャッキング	エレベータを上方に移動させ、チャッキングする。この際、最後にパルス送りで確実にチャッキングさせる。

● Disc change operation (Upward) (ディスクチェンジ動作 (上向きの例))



Process contents

1	Releasing	Moved the elevator downward and releases the chucking.
2	Unloading	Returns the disc to the tray. In this case, the operation completes at the falling edge of ULDSW [H→L (OFF→ON)].
3	Elevator downward	Moves the elevator upward and stops it when it reaches a predetermined pull-in position.
4	Loading	Takes out the tray from the magazine. Completes the operation when LODSW goes L (ON).
5	Chucking	Moves the elevator upward and chucks a disc. In this case, a final pulse is fed to make the chucking securely.

処理内容

1	リリース	エレベータを下方に移動させチャッキングを外す。
2	アンロード	ディスクをトレイに戻す。この時ULDSWの立ち下がり[H→L (OFF→ON)] をもって動作終了となる。
3	エレベータ下向き	エレベータを上方に移動させ、目的の引き込み位置まで移動した時点でSTOPする。
4	ローディング	マガジンよりトレイを引き出す。LODSWがL (ON) になった時点で動作終了となる。
5	チャッキング	エレベータを上方に移動させ、チャッキングする。この際、最後にパルス送りで確実にチャッキングさせる。

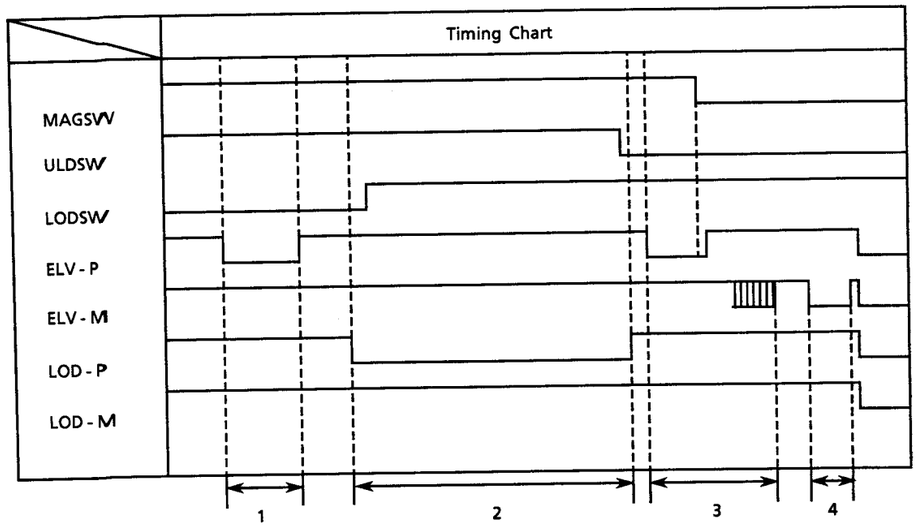
● Eject operation (イジェクト動作)

Operation to reject the magazine

1. Releases M-th disc (MP→MT), performs unloading, moves the elevator (MT→E) to release the lock, moves the elevator (E→2T), and then enters the standby condition.

マガジンをイジェクトする動作

1. M枚目をリリース (MP→MT)し、アンロード後エレベータを移動 (MT→E) してロックを外し、エレベータを移動 (E→2T) して待機状態になる。



Process contents

1	Releasing	Moved the elevator downward and releases the chucking.
2	Unloading	With ULDSW=H, LODSW=L the tray is in a loading status, so unloading operation is carried out. When ULDSW changes from H to L, LODM is stopped.
3	Eject	Moves the elevator downward and lowers it up to the eject position. Releases the magazine lock and confirms MAGSW. In this case, if MAGSW=L, the elevator is moved up to 1T position with a pulse signal.
4	Elevator shift	The elevator is moved to 1t position, and then moved to 2T position, and then eject operation completes. (Standby status)

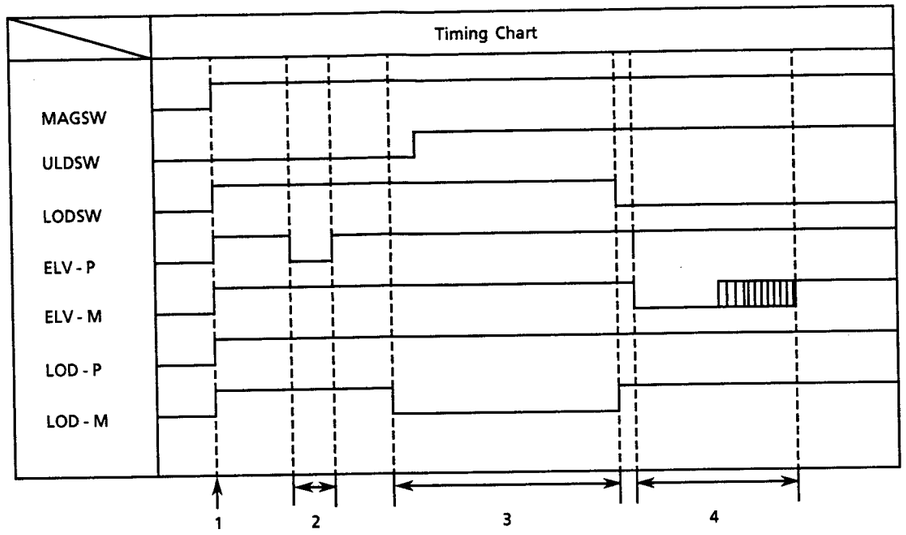
処理内容

1	リリース	エレベータを下方に移動させチャッキングを外す。
2	アンロード	ULDSWがH, LODSWがLの時にはトレイがローディングされている状態なので、アンローディング動作を行う。ULDSWがH→LとなるとLODMをストップさせる。
3	イジェクト	エレベータを下方に移動させ、イジェクト位置まで下降させる。ここでマガジンロックを解除し、MAGSWを確認する。この時MAGSWがLの場合にはエレベーターを1Tの位置までパルス送りで移動させる。
4	エレベータ移動	エレベータが1Tの位置まで移動した後、エレベーターは2Tの位置まで移動しイジェクト動作が終了する。(スタンバイ状態)

● Magazine insertion operation (マガジン挿入時の動作)

1. When a magazine is inserted, first disc is pulled-in and chucked.

1. マガジンが挿入されたときは、1枚目を引き込んでチャッキングする。



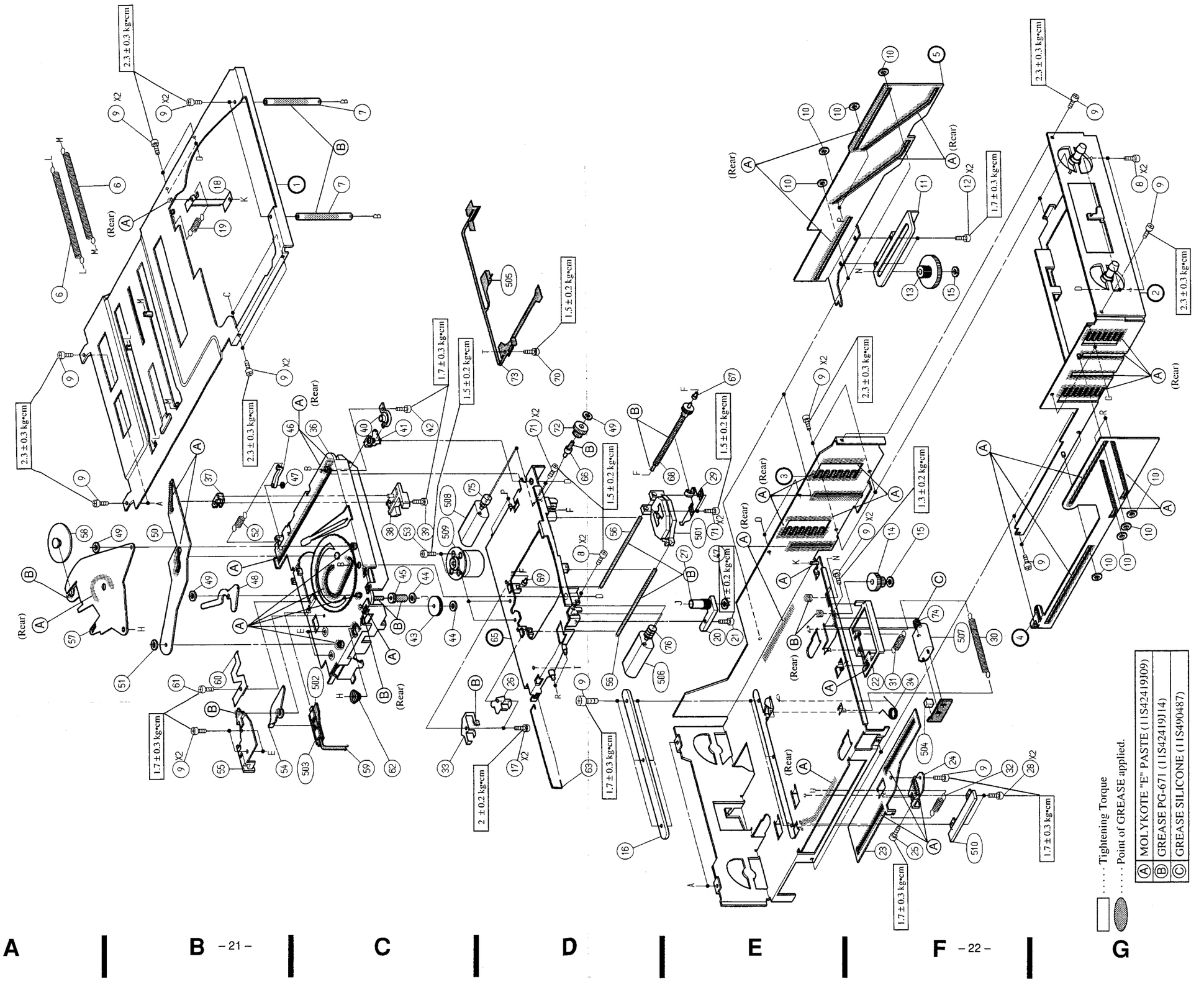
Process contents

1	Magazine insertion	When the magazine is inserted, MAGSW goes H.
2	Elevator shift	First, the elevator moves downward and moves to a specified pull-in position.
3	Loading	The loading motor rotates in forward and pulls in the tray. This makes LODSW to H, and the loading operation completes when LODSW shows L.
4	Chucking	The chucking operation completes by making ELV-M to L and feeding the elevator with the pulse signal and if the value of LPS is within a specified value.

処理内容

1	マガジン挿入	マガジンが挿入されると、MAGSWがHとなります。
2	エレベータ移動	最初にエレベータが下方に移動して、目的の引き込み位置へ移動する。
3	ローディング	ローディングモータを正転させ、トレイを引き込む。これによりLODSWがHになり、LODSWがLになった時点でローディングを終了する。
4	チャッキング	チャッキング動作は、ELV-MをLにして、エレベータをパルス送りにてLPSの値が規定値内であれば動作を終了する。

Exploded View (CD Mechanism) ● DT24A010


2.3 ± 0.3 kg•cm
1.7 ± 0.3 kg•cm
1.5 ± 0.2 kg•cm
2 ± 0.2 kg•cm
1.3 ± 0.2 kg•cm
(Rear)
· · · · · Tightening Torque
· · · · · Point of GREASE applied.
Ⓐ MOLYKOTE "E" PASTE (11S42419J09)
Ⓑ GREASE PG-671 (11S42419J14)
Ⓒ GREASE SILICONE (11S490487)

CD Mechanism Assembly Parts List

Note : No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
6		41B51993W01	Spring, Extension
7		47A51917W01	Shaft, Guide
8		03S94385F09	Screw, Pan (M2×3)
9		03S94385F19	Screw, Pan (M2×2.5)
10		04B41345P22	Washer, Lock (M2.6)
11	2-F	44B51886W01	Rack, Elevator
12	2-F	03S40014G07	Screw, W/Washer (M2×4)
13	2-F	44A60088W01	Gear, Rack
14	3-F	44A60089W01	Gear, Wheel
15		04B41345P06	Washer, Lock (M2.1)
16	5-D	15A51889W01	Guide, Magagine
17	5-D	03S40014G66	Screw, W/Washer (M2×3.5)
18	2-B	45A51880W01	Stopper, Tray
19	2-B	41B51993W02	Spring, Extension
20	4-E	45A60160W01	Spacer, Bracket Motor
21	4-E	03S70494F12	Screw, Pan (M2×8)
22	4-F	45A51874W01	Slide, Magazine Switch
23	5-F	45A51870W01	Slide, Sensor
24	4-F	07A51882W01	Bracket, Sensor
25	5-F	03S94385F11	Screw, Pan (M2×5)
26	4-D	07A60168W01	Stopper, Shaft (B)
27	5-F	44A52035W01	Gear, Drive
28	4-F	03S94385F28	Screw, Pan (M1.7×2)
29	3-E	41A60159W01	Spring, Nut
30	4-F	41B51993W03	Spring, Extension
31	4-F	41B51993W04	Spring, Extension
32	4-F	41B51993W05	Spring, Extension
33	5-C	07A60167W01	Stopper, Shaft (A)
34	4-F	41A51996W01	Spring, Torsion
36	3-C	01B51939W01	Assy., Riv. Chassis Tray
37	3-B	01A51932W01	Assy., Riv. Bracket Push Pull
38	3-C	45A51898W01	Arm, Push Pull
39	3-C	03S40014G61	Screw, W/Washer (M2×5)
40	3-C	15A51890W01	Guide, Chassis Tray
41	3-C	07A51884W01	Bracket, Corner
42	3-C	03S94385F10	Screw, Pan (M2×4)
43	4-C	44A52036W01	Gear, Cam
44	4-C	04B41345P15	Washer, Lock (M1.2)
45	4-C	44A51896W01	Gear, Driven
46	3-B	45A51894W01	Arm, Tray
47		04B41345P02	Washer, Lock (M1.7)
48	4-B	01A51937W01	Assy., Riv. Lever Slide
49		04B41345P12	Washer, Lock (M1.7)
50	3-B	45A52034W01	Lever, Cam
51	4-B	04B41345P04	Washer, Lock (M2.6)
52	3-B	41B51993W06	Spring, Extension
53	3-C	03S94385F01	Screw, Pan (M1.7×2.3)
54	5-B	45A51887W01	Arm, Switch
55	5-B	15B51891W01	Guide, Tray Side
56		47A60169W01	Shaft, Pickup
57	4-A	07B51879W01	Bracket, Clamper
58	3-A	43A50683W01	Table, Clamper
59	5-C	84T65057W01	FPC Switch P.C.Board
60	4-B	41A51872W01	Spring, Clamper
61	4-B	03S94385F06	Screw, Pan (M2×1.8)
62	5-C	41A51995W01	Spring, Compression
63	5-D	41A51923W01	Spring, Rod
66	3-D	46A60171W01	Stud, Middle
67	3-E	43A60164W01	Bush, Screw (A)
68	3-E	01V61300W99	Assy., Shaft Screw
69	4-D	43A60165W01	Bush, Screw (B)
70	3-D	03S40014G62	Screw, W/Washer (M2×3)
71		03S94385F18	Screw, Pan (M2×3.5)
72	3-D	44A60162W01	Gear, Middle
73	3-D	84T65058W01	FPC Drive P.C.Board
74	4-F	44A60151W01	Worm
75	3-D	44A60161W01	Gear, Motor
76	4-E	44A11281W01	Worm

Miscellaneous

501	3-E	88T55261W01	Pick Up Unit
502	4-C	40T35543W02	Switch, Detector (UNLOAD)
503	5-C	40T35543W02	Switch, Detector (LOADING)
504	5-F	40T15222W01	Switch, Detector (MAGAZINE IN)
505	2-D	40T71025F01	Switch, Detector (LIMIT)
506	4-E	59T65085W01	Motor, 7V-370mA (LOADING)
507	4-F	59T65085W01	Motor, 7V-370mA (SLED)
508	3-D	59T65085W01	Motor, 7V-370mA (ELEVATOR)
509	4-D	59T91005F03	Motor, 2V-215mA (SPINDLE)
510	5-F	18T55678W01	Volume, Slide RS32111 10K ohm

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CD Changer Mechanism

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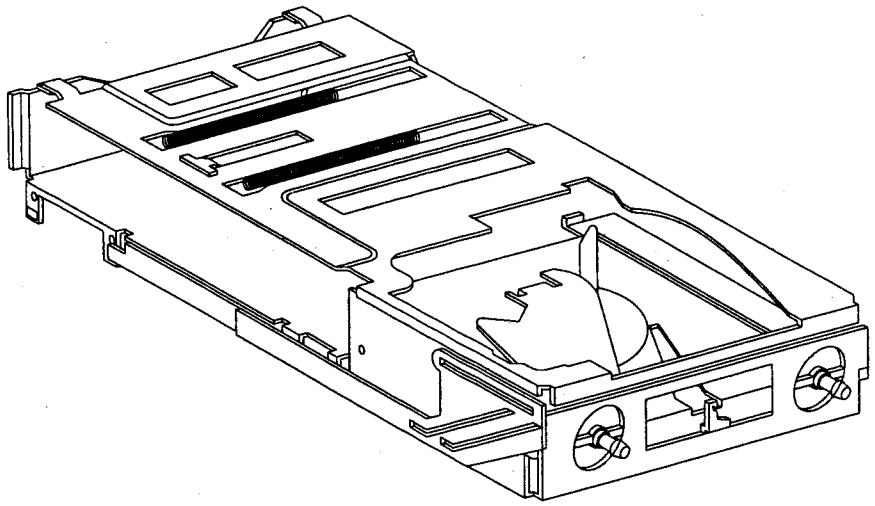
— ADDENDUM & REVISED —

● This manual is described on DT28A21D only. The DT28A21D is developed from DT24A020. For information that is not mentioned in this service manual, refer to the Service Manual • DT SERIES (Part No. 68E22617S01).

● 当モデルは、DT28A21Dについてのみ記載しております。
又、DT24A020がベースモデルとなっておりますので、相違部分のみ記載されてます。
詳細については、サービスマニュアル・DT SERIES (68E22617S01) を参照願います。



DT SERIES

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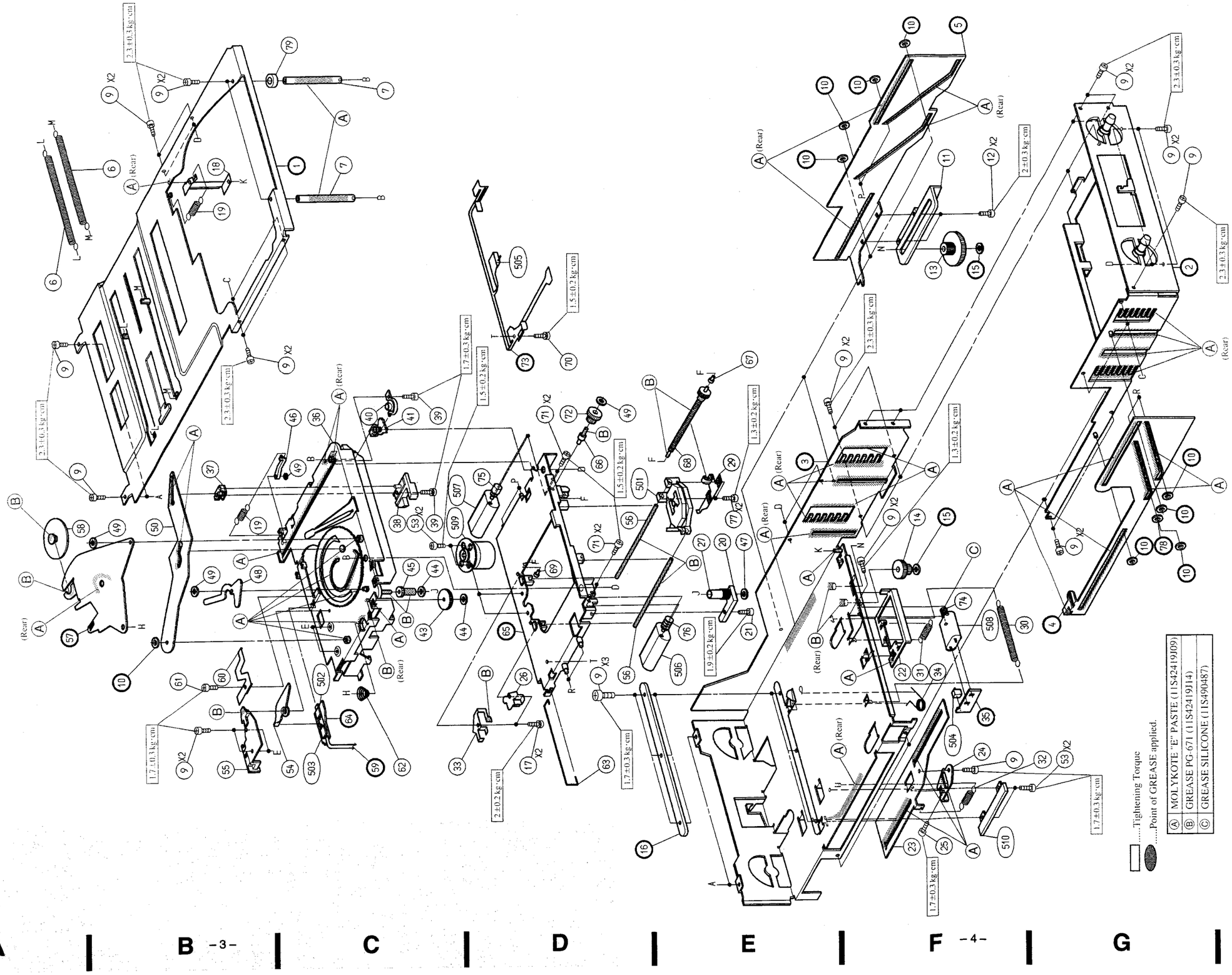
NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Cabinet Assembly Parts List (Only Difference)

NOTE : For the parts not mentioned, refer to the Service Manual for DT SERIES (Part No. 68E22617S01).

Model	DT24A020			DT28A21D		
Symbol No.	Index	Part No.	Description	Index	Part No.	Description
211		44B51886W01	Rack, Elevator		44B51886W10	Rack, Elevator
213		44A60088W01	Gear, Rack		44A60088W02	Gear, Rack
214		44A60089W01	Gear, Wheel		44A60089W02	Gear, Wheel
216		15A51889W01	Guide, Magazine		15A51889W02	Guide, Magazine
218		45A51880W01	Stopper, Tray		45A51880W02	Stopper, Tray
220		45A60160W01	Spacer, Bracket Motor		45A60160W02	Spacer, Bracket Motor
222		45A51874W01	Slide, Magazine Switch		45A51874W02	Slide, Magazine Switch
224		07A51882W01	Bracket, Sensor		07A51882W02	Bracket, Sensor
226		07B91155W01	Stopper, Shaft (B)		07B91155W02	Stopper, Shaft (B)
228		44A60161W01	Gear, Motor		44A60161W02	Gear, Motor
229		41A60159W01	Spring, Nut DT		41A60159W10	Spring, Nut DT
233		07A91154W01	Stopper, Shaft (A)		07A91154W02	Stopper, Shaft (A)
237		01A51932W01	Assy., Riv. Bracket Push Pull		01A51932W10	Assy., Riv. Bracket Push Pull
238		45A51898W01	Arm, Push Pull		45A51898W02	Arm, Push Pull
240		15A51890W01	Guide, Chassis Tray		15A51890W02	Guide, Chassis Tray
241		07A51884W01	Bracket, Corner		07A51884W02	Bracket, Corner
243		44A52036W01	Gear, Cam		44A52036W02	Gear, Cam
245		44A51896W01	Gear, Driven		44A51896W02	Gear, Driven
246		45A51894W01	Arm, Tray (A)		45A51894W02	Arm, Tray (A)
248		01A51937W01	Assy., Riv. Lever Slide		01A51937W02	Assy., Riv. Lever Slide
250		45A52034W01	Lever, Cam		45A52034W02	Lever, Cam
254		45A51887W01	Arm, Switch		45A51887W02	Arm, Switch
255		15B51891W01	Guide, Tray Side		15B51891W02	Guide, Tray Side
257		07B51879W01	Bracket, Clamper		07B51879W02	Bracket, Clamper
259		84T65057W01	FPC Switch P.W.Board		84T00692K01	FPC Switch P.W.Board
260		41A51872W01	Spring, Clamper		41A51872W10	Spring, Clamper
267		43A60164W01	Bush, Screw (A)		43A60164W02	Bush, Screw (A)
268		01V61300W99	Assy., Shaft Screw		01V21400Y48	Assy., Shaft Screw
269		43A60165W01	Bush, Screw (B)		43A60165W02	Bush, Screw (B)
272		44A60162W01	Gear, Middle		44A60162W02	Gear, Middle
273		84T65058W01	FPC Drive P.W.Board		84T00693K01	FPC Drive P.W.Board

Exploded View (CD Mechanism) ● For DT24A030 Model



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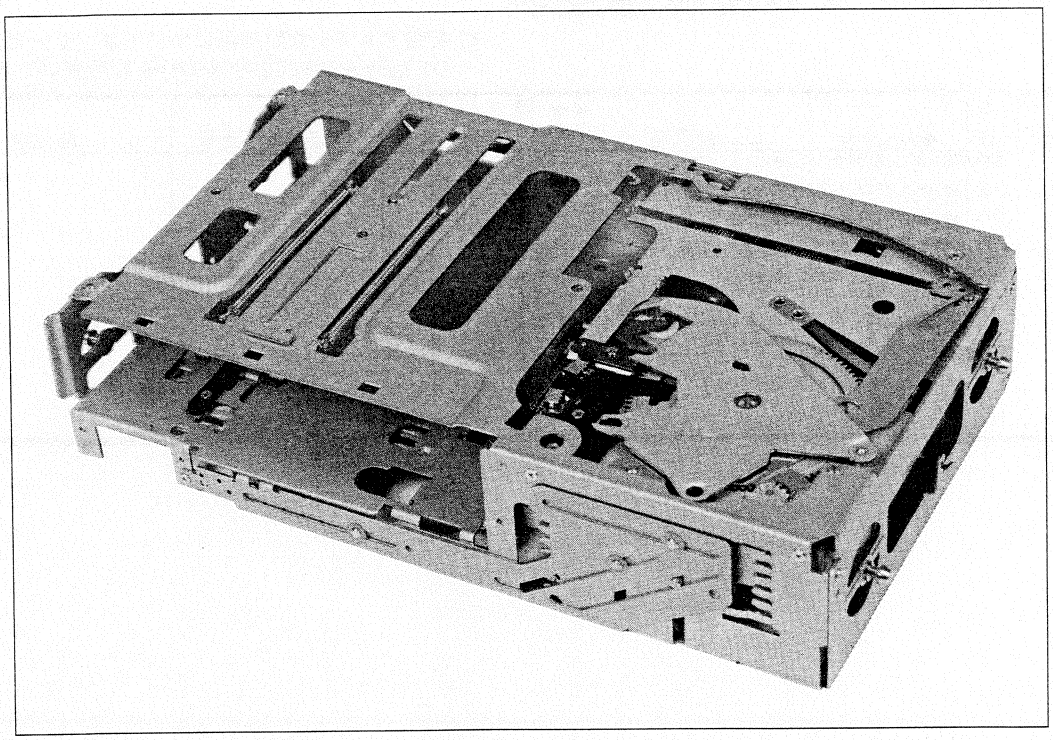
ADDENDUM & REVISED (II)

- This manual is described on DT24A030 only. The DT24A030 is developed from DT24A020. For information that is not mentioned in this service manual, refer to the Service Manual • DT SERIES (68E22617S01).
- 当マニュアルはDT24A030についてのみ記載しております。
  又、DT24A020がベースモデルとなっておりますので、相違部分のみ記載されてます。
  詳細についてはDTシリーズ (68E22617S01) を参照願います。



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CD Mechanism Assembly Parts List

NOTE : For the parts not mentioned, refer to the Service Manual for DT SERIES (68E22617S01).

Symbol No.	Index	Part No.	Description
23	5-F	45A61305W01	Slide, Sensor
58	3-A	43A50683W01	Table, Clamper
or		43A80217W01	Table, Clamper-S
78	3-G	04B41345P05	Washer, Lock (M3.5)
79	1-C	75A80830W01	Rubber, Sleeve

Symbol No.	Index	Part No.	Description

CDメカニズム関係部品表

※ 記載されていない部品については、サービスマニュアル・DT SERIES (68E22617S01) を参照願います。

記号	索引	部品番号	部品名	標準卸価格
23	5-F	45A61305W01	Slide, Sensor	230
58	3-A	43A50683W01	Table, Clamper	300
or		43A80217W01	Table, Clamper-S	230
78	3-G	04B41345P05	Washer, Lock (M3.5)	45
79	1-C	75A80830W01	Rubber, Sleeve	55

記号	索引	部品番号	部品名	標準卸価格

Exploded View (CD Changer Mechanism)

(DT28A21D)